A COMPREHENSIVE TAXONOMY OF ARGUMENTATIVE THESIS STATEMENTS: A PRELIMINARY PILOT STUDY[1]

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Abstract: Although it is universally acknowledged that argumentative texts constitute the core of academic discourse and that their production is the most difficult task for students to master, there is hardly any research available on the pivotal component of argumentative texts: the thesis statement. This paper presents a preliminary pilot study whose aim was to propose a comprehensive taxonomy of argumentative thesis statements, to test the taxonomy on argumentative essays, to investigate student preferences for argumentative thesis statement types, and to attempt to explain the relationship between thesis type selection and the prompt given to students in the essay writing task. For the purposes of the investigation, a subsection ($N = 225$) of the Hungarian Corpus of Learner English was selected and their thesis statements coded independently by two coders with the help of a codebook following a coder training. The results showed that the proposed taxonomy is suitable for the identification and categorisation of argumentative thesis statements, but they also revealed weaknesses in the codebook that need to be addressed. The findings provided insights into student preferences concerning argumentative thesis statement types with two thesis types (Simple policy and Causal theses) emerging as the most frequent. It was also found that in the investigated sample there is no relationship between the prompt and the argumentative thesis types. The proposed taxonomy is recommended for use in the writing classroom in order to familiarise students with the diversity of argumentative thesis statement options.

Keywords: academic discourse, argumentative essay, learner corpus, thesis statement, written argumentation

1   Introduction

The argumentative text is an established text type that has been addressed by scholars from various disciplines, for example logic (Toulmin 1958), rhetoric (Perelman & Olbrechts-Tyteca, 1969), discourse analysis (Hoey, 2001; van Dijk, 1980), or composition studies (Connor, 1987, 1990, 1993; Connor & Lauer, 1985; Connor & Takala, 1987; Ferris, 1994; Hyland, 1990). The significance of this text type in the field of science derives from the fact that reasoning and argumentation are central features of the oral and written discourse of any academic community. Consequently, research on argumentative texts and the overt teaching of argumentation to university students has been a major concern of institutions of tertiary education together with the development of effective theoretical backgrounds for composition programmes focusing on argumentation.

In spite of the increased attention given to argumentative texts, comparatively little research in general and empirical research in particular is available on argumentative thesis statements, and no comprehensive taxonomy of thesis statements has been produced which could be used as a reliable and comprehensive analytical tool by researchers and as a simple and effective teaching aid by writing classroom practitioners.

The present paper proposes to give an account of a preliminary pilot study whose main aim was to propose a comprehensive and exhaustive taxonomy of argumentative thesis statements based on existing adaptations of classical rhetorical tools. The second aim of the study was to test the proposed taxonomy on argumentative essays selected from the Hungarian Corpus of Learner English in order to determine (1) whether it is a functional taxonomy suitable for the categorisation of argumentative thesis statements, (2) whether it can be used to study student argumentative thesis preferences, and (3) whether it may help explain the relationship between argumentative thesis type choices and the essay prompts provided to students in the essay writing task.

The findings indicate that the proposed taxonomy has the potential to become a powerful analytical and educational tool. Furthermore, it proved suitable for the mapping of the argumentative thesis preferences of the student population whose scripts were selected for the study. Finally, the investigation also revealed that there does not seem to be a direct relationship between the essay prompts and the type of argumentative theses generated by students on the basis of the prompts.

2   Review of the literature

The proposed taxonomy of argumentative essays was generated from a formal system developed in classical times and adapted for the fields of written and oral argumentation. The following overview presents a comparative analysis of the adaptations.

2.1   Argumentative theses: written argumentation

Teachers of argument have repeatedly returned to classical Greek and Roman rhetoric (Fahnestock & Secor, 1996; Fulkerson, 1996) in order to find a formal system that can be used for the development of argumentation skills. According to classical pedagogy, the nature of a controversy and a point of contention concerning an issue could be determined with the use of four questions, three of which originated from forensic and one from deliberative rhetoric. The four questions probing the kinds of issues arguments address are questions of *fact*, of *definition*, of *values*, and of *policy*. Questions of fact establish the existence of something. Questions of definition determine the category to which something belongs. Questions of value relate to value judgement to establish the nature of a thing, for example, in terms of salience (important/not important), acceptability (right/wrong), respectability (honourable/dishonourable), or quality (good/bad). Questions of policy determine a course of action that should be followed.

The adaptations of the classical system differ to various degrees in that the derived question sets feature some unique questions in addition to the shared questions. The adaptations considered in this paper are Graves and Oldsey's (1957) set of questions and Eckhardt and Stewart's (1979) functional taxonomy (as both cited in Fulkerson, 1996, pp.38-39), Fahnestock and Secor's (1990) taxonomy of argumentative theses based on four classical

question types, and Fulkerson's (1996, pp.40-41) categorisation of thesis statements. Common to all of these adaptations is the assumption that each of the questions is suitable for the identification of the main purpose of part or of the whole of an argumentative piece of writing.

Graves & Oldsey (1957)	*Eckhardt & Stewart (1979)*	*Fulkerson (1996)*	*Fahnestock & Secor (1990)*
1. Questions of fact	1. Definition	1. Substantiation	1. Categorical propositions
2. Questions of definition	2. Substantiation	2. Evaluation	2. Causal propositions
3. Questions of probability	3. Evaluation	3. Recommendation	3. Evaluative propositions
4. Questions of value	4. Recommendation		4. Proposals
5. Questions of policy			

Figure 1. Adaptations of the classical model for written argumentation

The summary of the derived question sets presented in Figure 1 shows that the number of questions in a set ranges from three to five. The questions that appear in all the sets, albeit under different labels are value (evaluation) and policy (recommendation or proposal) questions. Questions of fact appear as a separate question type in Graves and Oldsey's set. Fulkerson includes questions of fact in the Substantiation category in his set, and Fahnestock and Secor collapse the categories of questions of fact and definition into categorical propositions. Questions of definition occur as separate categories in Graves and Oldsey's as well as in Eckhardt and Stewart's sets and implicitly in the substantiation and categorical proposition categories in Fulkerson's and Fahnestock and Secor's set. Causal propositions constitute the second category of Fahnestock and Secor's model and the question type related to causes and effects is also included in Fulkerson's model. Finally, questions of probability feature only in Graves and Oldsey's set. The question of probability is one of likelihood (i.e., that an act was committed by the accused), and according to Fulkerson it is closely connected to the question of fact (1996). This is probably one reason why questions of probability do not appear explicitly in any of the other question sets. They form part of the substantiation category in Eckhardt and Stewart's set.

The common assumption that underlies the question sets, namely that the questions probe the main purpose of the text, means that the questions are suitable for the identification and classification of the claims writers can argue for in argumentative writing. The questions are equally suitable for the identification of the main claim of a text, the thesis statement, and of the claims of the supporting arguments within the text. This may be another reason why questions of probability do not constitute a separate category in Fulkerson's and Fahnestock and Secor's model. Probability is a quality inherent in all arguments. As shown by Toulmin (1958), the strength of a claim, namely the likelihood concerning the validity of the claim, needs to be indicated in an argument. The element in the argument structure proposed by Toulmin that has this purpose is the qualifier, a word that indicates the strength of the claim, for example, *presumably*, *almost certainly*, *certainly* as in "Harry was born in Bermuda, so, presumably, Harry is a British subject" (p.97). Therefore, the question of probability is a question that the arguing parties address irrespective of the kind of claim they wish to substantiate and requires no separate category in a taxonomy of argumentative theses.

The four adaptations of the classical formal system of questions presented in this section were developed to be used in the field of written argumentation. A similar comparative analysis of the classical formal system based argumentative thesis schemes used in the field of oral argumentation is presented in the following section and offers further insights into the typology of argumentative thesis statements.

2.2   Argumentative theses: oral argumentation

Forensic science has produced a number of taxonomies dealing with resolutions (motions), the academic debate equivalents of thesis statements. Similarly to the question sets suitable for the identification and classification of written claims, the propositions presented in these taxonomies also originate from the four questions probing the kinds of issues arguments address: questions of *fact*, of *definition*, of *values*, and of *policy*.

Meany & Shuster (2002)	Trapp (2003)	Freeley & Steinberg (2004)	Trapp & Hanson (2005)

1. Propositions of fact
2. Propositions of value
3. Propositions of policy
	1. Definitions
	2. Descriptions
	3. Relationship statements
	  3.1. Contingency
	   3.1.1. Relationship of sign
	   3.1.2. Causal relationship
	  3.2. Similarity
	  3.3. Claims of evaluation
	   3.3.1. Single object evaluation
	   3.3.2. Two object comparison
	   3.3.3. Claims of action (policy)
		1. Propositions of fact
		2. Propositions of value
		3. Quasi-policy propositions
		4. Propositions of policy
			Propositions of policy
			vs.
			Comparative advantages policy

Figure 2. Adaptations of the classical model for oral argumentation

Figure 2 presents four categorisations of debate motions. The simplest categorisation (Meany & Shuster, 2002) closely approximates the categories in the classical formal system. The one exception is the definition category: given that *definition* is a *stock issue* (i.e., "[t]hose issues common to most debates on given types of propositions"; Freeley & Steinberg, 2004, p.53) in academic debate and is used irrespective of the proposition type, it is not featured as a separate category.

Freeley and Steinberg's (2004) set of propositions is also closely related to the classical system. They establish the *quasi-policy propositions* category between the *value* and *policy propositions* categories. A quasi-policy proposition (e.g., "Resolved: That abortion should be legalized.") resembles a policy statement because it contains the word "should", but in fact it focuses on the clash of two values (i.e., pro-life vs. pro-choice) and is, therefore, closer to propositions of values and is based on stock issues characteristic of propositions of value (e.g., establishing a *criterion*, Hensley & Carlin, 1994). (For a detailed discussion, see Freeley & Steinberg, 2004.) Apart from this alteration, Freeley and Steinberg mostly follow the original categorisation.

Trapp's (2003) approach represents the greatest deviation from the classical system because instead of the category labels of *fact*, *value*, and *policy* he focuses on *definitions*, *descriptions*, and *relationships*, which categories expand on and overlap with those of the classical system. The novel features of the classification include the provision of separate categories for cause-effect and sign relationships under the heading *contingency*, the subdivision of evaluative claims (*similarity*, on the one hand, and *evaluation of single objects* and *comparison of two objects*, on the other, previously all categorized as *propositions of value*), and the inclusion of claims of policy in the evaluation category. Including *claims of policy*, that is, claims stating that a particular course of action should be followed, under claims of evaluation seems rather counter-intuitive. Trapp (2003), however, argues that "[t]hese claims evaluate a concept by suggesting that action be taken with respect to that concept" (p.17).

Trapp's (2003) categorisation was refined by Trapp and Hanson (2005). In his original classification Trapp argues that claims of action are inherently claims of comparison (viz., comparing the status quo with the proposed state of affairs), and Trapp and Hanson propose a distinction between *propositions of policy* (i.e., claims of action) vs. *comparative advantages policy* propositions, that is, two competing claims of action which compete with each other (as opposed to the status quo).

Following the review of the adaptations of the classical formal system of questions for the fields of written and oral argumentation, the next section introduces the taxonomy of argumentative thesis statements developed on the basis of the classical system and its adaptations.

3   The proposed taxonomy of thesis statements

In the proposed taxonomy, the thesis statements are divided into two subtypes: non-relational and relational theses. Non-relational theses (Figure 3) focus on one element about which they formulate an evaluation or in connection with which they articulate a recommendation. Relational theses (Figure 4) establish a relationship between two elements, for example, by means of comparison or contrast, or connect two elements, for example, by placing one in the cause and the other in the effect category.
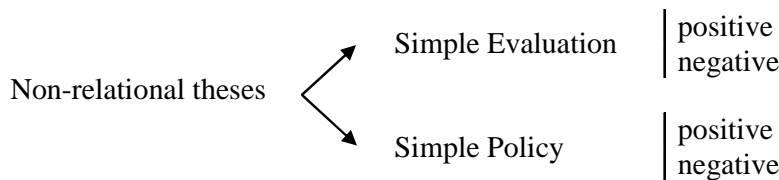
Non-relational theses

- Simple Evaluation | positive / negative
- Simple Policy | positive / negative

Figure 3. The proposed non-relational thesis categories

Relational theses

- Categorical | all-in connection / all-out connection / partial connection
- Similarity | positive / negative
- Complex Evaluation | evaluation as comparison with degree (i) / evaluation as comparison with degree (ii) / equative evaluation / superlative evaluation
- Sign
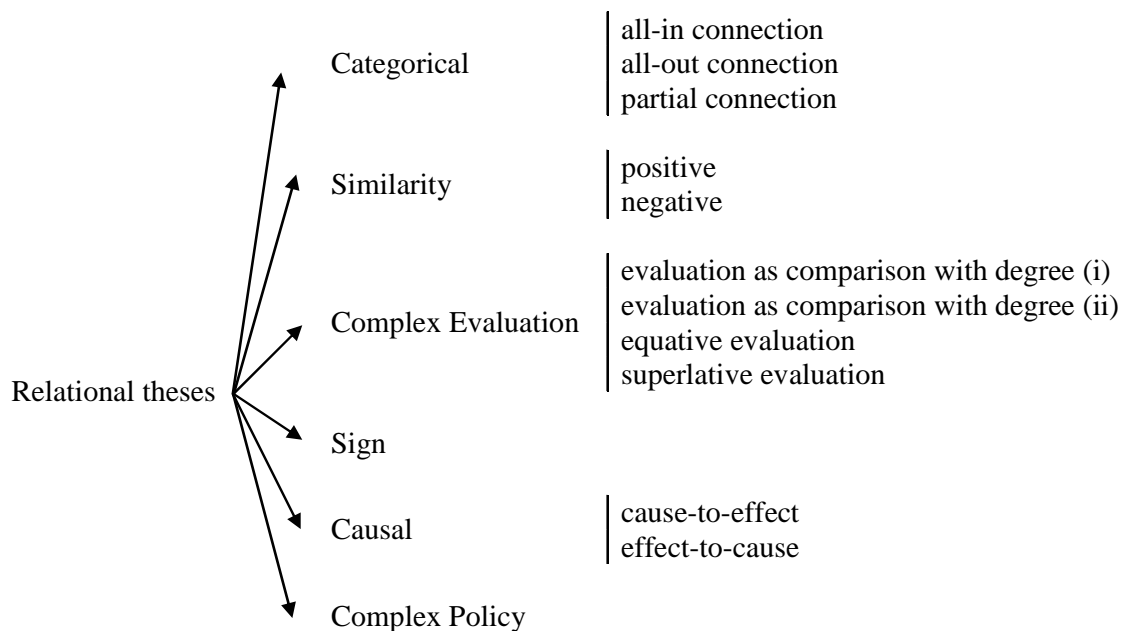- Causal | cause-to-effect / effect-to-cause
- Complex Policy

Figure 4. The proposed relational thesis categories

As a result of the categorisation based on the number of elements, some thesis metacategories have been split in two: for example, the evaluation thesis category comprises the simple and complex evaluation subcategories of which simple evaluations are categorised as non-relational theses and complex evaluations as relational theses. The labels *simple* and *complex*, therefore, indicate non-relational and relational thesis subtypes in the proposed taxonomy.

3.1   Non-relational thesis statements

Of the two main categories in the taxonomy, the non-relational one is the smaller with two subtypes. Both subtypes have a complex, that is, relational alternative.

3.1.1   Simple evaluation

A simple evaluation thesis is an arguable statement in which the arguer proposes that a single element can be characterised with a specific property. Depending on whether the thesis formulates an affirmative or negative claim, an evaluation thesis can be positive or negative. Accordingly, its forms are

[1]   X is Y

[2]   X is not Y

In both cases 'Y' is an adjective expressing a value judgement. Examples for these theses taken from the argumentative essay corpus are the following:

[1a]   *Unfortunately, the strict welfare standards planned or introduced by the European Union or other organizations seem to be highly hypocritical.*
[2a]   *However, enrolling in such a time consuming learning process is not indispensable.*

In [1a] and [2a], the elements *strict welfare standards* and *time consuming learning process* (i.e., university studies) are evaluated by the adjectives *hypocritical* and *dispensable*.

3.1.2   Simple policy

A simple policy thesis is an arguable statement in which the arguer proposes that a specific course of action should be taken. It can be positive or negative:

[3]   X should be done (about Y)

[4]   X should not be done (about Y)

The focus in these theses is on the 'Y' element and the course of action that the proponent recommends in connection with it is 'X'. Theses [3a] and [4a] illustrate this subcategory:

[3a]   *Therefore all the people should become vegetarians.*

[4a]   *Thus, in my opinion, people should refrain from being vegetarians.*

The focus is on the element *people* in both examples, and the proponents recommend that the course of action to be followed is to convert to or to abstain from vegetarianism.

3.2   Relational theses

Relational theses constitute the larger category of the proposed taxonomy. The six subtypes include independent thesis types and the complex alternatives of the non-relational theses.

3.2.1   Categorical thesis

A categorical thesis is an arguable statement in which the arguer proposes that an element (the subject) can be fully or partially placed in or excluded from the category of another element (its predicate). Unlike in the case of non-relational theses, relational theses focus on two elements; in this subcategory the elements are the subject and the predicate of the claim expressed in the thesis statement. The three types of categorical relationship that can be established between the elements of a categorical thesis determine the forms of this thesis type:

[5]   X is Y (all-in connection)

[6]   X is not Y (all-out connection)

[7]   X is partly Y (partial connection)

'Y' in these thesis statements refers to the category into which element 'X' can be fitted. Examples [5a] – [7a] illustrate the three categorical thesis subtypes:

[5a]   *Therefore, welfare is a fundamental right of animals as well.*

[6a]   *Today's universities and colleges are unable to answer the challenges of the labour market.*

[7a]   *Private tertiary institutions often overcharge.*

In [5a] *animal welfare* is placed in the category of *fundamental right*. *Universities* and *colleges* in [6a] are categorised as institutions of tertiary education that fail to respond to the labour market. *Institutions that overcharge* constitutes a category in which in [7a] *private tertiary institutions* is 'often' placed according to the essay writer, hence the partial nature of the connection.

3.2.2   Similarity thesis

A similarity thesis is an arguable statement in which the arguer proposes that two elements are similar or different. This relational thesis type can also be positive or negative:

[8]   X is like Y

[9]   X is not like Y

In similarity theses 'X' and 'Y' are the two elements that are compared [8] or contrasted [9]. The emphasis in thesis type [8] is on the similarities whereas in thesis type [9] on the differences between two entities. Examples of such theses are the following:

[8a]   *The plot of the Bible is like that of the film entitled the Matrix.*

[9a]   *Deism is not like Unitarianism.*

Thesis [8a] contends that the Bible and the film share a number of features in terms of their plots while [9a] contrasts a type of belief and a system of Christian belief, focusing on their dissimilarities.

3.2.3   Complex evaluation

A complex evaluation thesis is an arguable statement in which the arguer proposes that two or more elements can be evaluated on the basis of a specific property. Within this category there are two thesis subtypes, comparison with a degree and superlative comparison, each of which can be further subdivided into two subtypes. The four forms of realisation are the following:

[8]   X is more Z than Y (evaluation as superiority comparison with degree)

[9]   X is less Z than Y (evaluation as inferiority comparison with degree)

[10]   X is as Z as Y (equative evaluation)

[11]   X is the most Y (superlative evaluation)

In [8], [9] and [10] 'Z' is an adjective that expresses value judgement whereas 'X' and 'Y' are the two entities compared relative to this value judgement. In thesis type [11], 'Y' is an adjective in the superlative form expressing value judgement. The following theses illustrate the four subtypes:

[8a]   *I claim that learning soft skills (for example, communication and team work) is more important than the technical knowledge.*

[9a]   *Businessmen are less aggressive than businesswomen.*

[10a]   *Hitler was as power hungry as Napoleon.*

[11a]   *However, there are still facts proving that our country's higher education is one of the best systems in Europe.*

In [8a] the two elements compared are *soft skills* and *technical knowledge*. The value judgement is *salience* expressed with the comparative form of *important*. *Businessmen* and *businesswomen* [9a] are the two elements compared in terms of *aggressiveness* as a value. Example [10a] expresses a comparison to the same degree where two historical figures are evaluated in relation to their *hunger for power*. In the last thesis [11a] *higher education* is evaluated as the *one of the best* (value judgement). Unlike the previous three theses in this category, this thesis has one explicit element. The second element is implied: if something is one of the best, it means that it is superior to most others of its kind.

3.2.4   Sign thesis

A sign thesis is an arguable statement in which the arguer proposes that the presence of one element can be taken as the sign of the presence of another element (which is not directly observable for some reason). For this thesis type a causal relationship needs to be assumed between two elements. The claim expressed by the thesis refers to the existence of the element that is not directly observable. This relational thesis does not have subtypes. Its form is the following:

[12]   X can be taken as a sign that Y is the case

'X' is the element that can be observed and it is considered as a sign that a second element ('Y'), which is the unobservable cause of 'X', is present. Thesis [12a] illustrates this thesis type:

[12a]   *Receiving unordered credit cards is a sign of identity theft.*

The observable element is the *unordered credit card* whereas the unobservable element as a result of which the credit cards have been issued is *identity theft.*

3.2.5   Causal thesis

A causal thesis is an arguable statement in which the arguer proposes that of two elements one is the cause and the other one is the effect. Both of the elements in the focus of the thesis statement are directly observable. This thesis type has two subtypes, depending on the element that needs to be established:

[13]   X causes Y (cause-to-effect)

[14]   Y is the effect of X (effect-to-cause)

In [13] the emphasis is on 'X', the cause. In [14] 'Y' the element that is to be established is the effect. The following examples illustrate these thesis types:

[13a]   *This process of globalisation will create a better life and better world for all.*

[14a]   *The roots of the problem of the falling standards of literacy are to be found in the low level of elementary school teaching.*

Thesis [13a] formulates a prediction in which *globalisation* is the cause that brings about a *better life and world.* In thesis [14a] *falling standards* are the effect of *poor elementary school*

teaching. In the theses both elements, the cause and the effect, are named and are assumed to be directly observable.

3.2.6   Complex policy

A complex policy thesis is an arguable statement in which the arguer proposes that a specific course of action should be taken rather than another one. As opposed to a simple policy thesis, in such theses two courses of action are included explicitly. There are no subtypes in this thesis category and the typical form of the thesis is the following:

[15]   X should be done rather than Y

In [15] 'X' is the recommended and 'Y' is the disfavoured course of action. Example [15a] illustrates this thesis type:

[15a]   *For all these reasons Universities need to concentrate on producing experts in their own scientific fields, rather than communication and teamwork specialists.*

The two potential courses of action discussed in [15a] are the kinds of experts that universities should train. The favoured course of action is formulated in the first clause.

The Complex Policy thesis statement is the last thesis type in the taxonomy of thesis statements generated on the basis of the adaptations of the classical formal system of questions for the fields of oral and written argumentation. The taxonomy is as comprehensive as the adaptations it relies on make possible. In order to test whether the established categories of the taxonomy are exhaustive and unambiguous, it needs to be applied to the analysis of argumentative essays.

4   Research questions

The aim of the preliminary pilot study presented in this paper was to answer the following research questions:

1. Can the proposed taxonomy of argumentative theses be used reliably to determine the type of the thesis statements identified in a subset of the Hungarian Corpus of Learner English?
2. What type of thesis statements do students use in the subset of the corpus under investigation?
3. Does the prompt affect the type of thesis statement students favour?

5   Methods

The Hungarian Corpus of Learner English (HuCLE), a subsection of which was used to seek answers to the research questions posited above, comprises approximately 1,500 essays written by students majoring in English at the School of English and American Studies, Eötvös Loránd University, Budapest. The essays were all written for the second language proficiency examination. Students take this examination in their third year of study, usually in the spring semester, following two Academic Skills courses, which (are offered in

the first year and) lay emphasis on writing skills development, and an advanced writing course, which (is offered in the second year or in the first semester of the third year and) focuses on written argumentation. The examinees produce a longer and a shorter script in the written part of the examination. For the longer script, they receive a short written prompt (predominantly a newspaper article excerpt), and they are expected to select a thematic aspect from it and to develop it into an argumentative essay of 450-500 words. The examination is administered once every semester, using a different prompt. The use of a monolingual dictionary is allowed.

Since the coding of the corpus is still in progress, a subset of essays was selected from the coded section of the HuCLE: in the present paper, the analyses are based on the argumentative essays written by the students in the spring 2003 and spring 2004 semesters. The sample randomly chosen represents a total of 225 essays (approximately 15 per cent of the total corpus). The sample thus selected was deemed large enough to conduct the pre-testing of the taxonomy of argumentative thesis statements.

In order to answer the research questions, the following procedures were carried out. First, two coders (the authors of the paper) discussed the definitions of the thesis types in the proposed taxonomy of argumentative theses and considered thesis examples. This resulted in the rewording of some definitions. Secondly, in the pilot coding phase, the thesis statements of 20 randomly chosen essays were identified and independently categorised by the two coders based on the proposed taxonomy of argumentative theses. In ambiguous cases, when the thesis statement type was difficult to identify, for example, because of the poor organisation of the introductory section, clarification was sought through reference to the body and/or conclusion sections of the essays. Then, following the individual coding phase, the two coders compared their codings and in cases of disagreement the definitions of the thesis types were further revised in the course of consensus-building discussions. That concluded the coder-training phase, following which the 225 essays were independently coded by the two coders. In order to measure inter-coder agreement, the percentage agreement of the two coders was calculated. Unfortunately, the present data set did not satisfy the requirements for using a more robust statistical procedure to measure agreement (e.g., Kohen's Kappa); however, this will in all likelihood be an available option once the coding of the whole corpus has been performed. Having coded the 225 essays, the coders once again deliberated on the ambiguous cases and arrived at the final classification for each of the thesis statements. Since in some of the cases the thesis statements proved to be bifurcated or trifurcated (i.e., there were two or three controlling ideas in the thesis statement), the total number of thesis statements is actually higher than that of the essays, $N = 230$.

Example 16 illustrates a bifurcated thesis.

[16]   *Modern people commit cruel crimes against animals because slaughtering them is neither a necessity for living nor a source of healthiness, moreover humans act immoraly and sinfully when killing animals.*[2]

In this thesis the writer formulates two claims: (1) *Modern people commit cruel crimes against animals because slaughtering them is neither a necessity for living nor a source of healthiness* and (2) *humans act immoraly and sinfully when killing animals*. Whereas the

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[2] The samples taken from the corpus have not been edited for spelling or language use.

topics (*modern people* and *humans*) may be considered to overlap to a certain extent, the controlling ideas are so different that each of these claims could be developed into a separate argumentative essay.

In an attempt to answer the second research question regarding student preferences, the descriptive statistics (frequency) were calculated, and a chi-square test was conducted in order to explore the third research question focusing on the relationship between the prompt and the types of thesis statements opted for by the students.

6   Results

One of the crucial aspects of the investigation is whether the taxonomy provides for a reliable classification of thesis statements. The overall percentage agreement between the two coders for the sample of essays was 85.65%, which in similar studies is generally considered to be good.

The percentage agreement analysis has shown that the two coders were the most unanimous in the case of Complex evaluation/superlative evaluation and Complex policy theses: in these two cases, there was 100% agreement between the two coders. The second best agreement was achieved in the Simple policy/positive category: for this particular category, the two coders had 90.60% agreement, which, owing to the large number of thesis statements classified as such, largely contributed to the high figure for overall percentage agreement. Similarly to their positive counterparts, Simple policy/negative thesis statements and Categorical theses/all-out were rather equivocally coded, at 76.92% and 60.00%, respectively. For three of the remaining categories, the percentage agreement was between 50 and 60 per cent: Causal thesis/cause-to-effect (56.25%), Categorical thesis/all-in connection (52.94%), and Complex evaluation/X is less Z than Y (50.00%).

In the case of the remaining categories, percentage agreement remained below 50 per cent: for Simple evaluation/positive, it was 46.15%; for Causal thesis/effect-to-cause, it was 42.86%; and for Simple evaluation/negative and Complex evaluation/X is more Z than Y, it was 33.33%. (In the case of Similarity thesis/comparison/negative and Sign theses there were insufficient data available to make meaningful comparisons.) The Simple evaluation/positive type theses were mostly misclassified either as Categorical thesis/all-in connection or as Simple policy/positive. The Causal thesis/effect-to-cause type theses were misclassified as Causal thesis/cause-to-effect. The two lowest ranking categories in terms of percentage agreement, namely, Simple evaluation/negative and Complex evaluation/X is more Z than Y, were misclassified as Categorical thesis/all-out connection or Complex evaluation/X is less Z than Y and Simple evaluation/positive or Simple policy/positive theses, respectively.

Table 1 shows the break-down of the 230 thesis statements into the two major categories of the taxonomy, relational and non-relational thesis statements, based on the results of the final coding of the individual statements (after deliberation). The figures reveal that writers of the essays were three times as likely to write an argumentative essay with a non-relational thesis statement as one with a relational one.

	N	%
Non-relational	174	75.65
Relational	56	24.34
Total	**230**	**100.00**

Table 1. Relational vs. Non-relational theses in the sample

The finer classifications of the thesis statements are presented in Table 2.

	N	%	Cumulative %
Simple policy/positive	139	60.4	60.4
Causal thesis/cause-to-effect	23	10.0	70.4
Simple evaluation/positive	20	8.7	79.1
Categorical thesis/all-in connection	14	6.1	85.2
Simple policy/negative	12	5.2	90.4
Causal thesis/effect-to-cause	6	2.6	93.0
Categorical thesis/all-out connection	4	1.7	94.8
Complex evaluation/X is more Z than Y	3	1.3	96.1
Complex evaluation/superlative evaluation	3	1.3	97.4
Simple evaluation/negative	2	.9	98.3
Complex evaluation/X is less Z than Y	2	.9	99.1
Similarity thesis/comparison/negative	1	.4	99.6
Complex policy	1	.4	100.0

Table 2. The final classification of the thesis statements

In 60.4% of the cases, students chose Simple policy/positive thesis statements for their essays; the only additional thesis type that attains 10% is Causal thesis/cause-to-effect. The other types of theses remain below 10% (Simple evaluation/positive, Categorical thesis/all-in connection, Simple policy/negative, Causal thesis/effect-to-cause, Categorical thesis/all-out connection, Complex evaluation/X is more Z than Y, Complex evaluation/superlative evaluation) and below 1% (Simple evaluation/negative, Complex evaluation/X is less Z than Y, Similarity thesis/comparison/negative, Complex policy).

Thesis type	Semester				Total	
	Spring 2003		Spring 2004			
	N	%	N	%	N	%
Simple policy/positive	51	60.00	88	60.69	139	60.43
Causal thesis/cause-to-effect	8	9.41	15	10.34	23	10.00
Simple evaluation/positive	7	8.24	13	8.97	20	8.70
Categorical thesis/all-in connection	7	8.24	7	4.83	14	6.09
Simple policy/negative	5	5.88	7	4.83	12	5.22
Causal thesis/effect-to-cause	1	1.18	5	3.45	6	2.61
Categorical thesis/all-out connection	1	1.18	3	2.07	4	1.74
Complex evaluation/X is more Z than Y	2	2.35	1	0.69	3	1.30
Complex evaluation/superlative evaluation	1	1.18	2	1.38	3	1.30
Simple evaluation/negative	0	0.00	2	1.38	2	0.87
Complex evaluation/X is less Z than Y	1	1.18	1	0.69	2	0.87
Similarity thesis/comparison/negative	1	1.18	0	0.00	1	0.43
Complex policy	0	0.00	1	0.69	1	0.43
Total	**85**	**100.00**	**145**	**100.00**	**230**	**100.00**

Table 3. The cross-semester comparison of the various thesis statement types

The last research question sought to explore whether the prompt for the argumentative essay task has a statistically significant effect on the choice of thesis statements. Table 3 shows the cross-semester comparisons of the thesis statement types. The figures indicate that similar trends may be observed between the two semesters: the difference between the number of thesis statements classified (85 and 145 in the two semesters) is mirrored in the figures for individual thesis types as well; for example, there are almost twice as many Simple evaluation/positive and Simple policy/positive theses in the spring 2004 semester, but it must be noted that the number of theses from this semester is almost twice as high. In order to explore any statistically significant differences between the distributions of the thesis types across the two semesters, a chi-square test was carried out. The test result was $\chi^2_{(12)} = 7.29$; $p = 0.838$; therefore, it may be concluded that no statistically significant differences exist between the two semesters with regard to the distribution of individual essay types.

7   Discussion

Regarding the first research question, that is, whether the proposed taxonomy of argumentative theses may be used to reliably identify the thesis statements from the Hungarian Corpus of Learner English, the answer is positive. Although at this stage of processing, due to the limitations of Kohen's Kappa, only percentage agreement could be calculated, the overall results indicated a good level of inter-coder reliability. Nevertheless, the results have revealed that the definitions of certain thesis types need to be further refined with more examples provided in the codebook in order to reduce the number of misclassifications and to increase the reliability of coding to a higher level: this is especially true in the case of Simple evaluation/negative and Complex evaluation/X is more Z than Y. For the Causal type of theses the coders must consult the body and the conclusion sections of the analysed essays to determine whether the writer wants to establish the cause or the effect.

This is also true for Simple evaluation theses where the wording of the thesis resulted in wrong categorisation. It also remains to be investigated and taken into account during the redrafting of the codebook to what extent language proficiency and, as a consequence, the writers' ability to word their theses effectively, influences the accuracy of the identification of the thesis types.

The choices of thesis statements were examined in order to answer the second research question. A significant preference can be noticed for non-relational as opposed to relational thesis statement types. The predominance of non-relational thesis types may be due to the fact that it is a less complex task in terms of organising ideas and generating the appropriate amount of supporting evidence to substantiate such theses. Relational theses require the handling of at least two key elements introduced in the thesis statement, and this is a cognitively more demanding task which requires more time to generate ideas, to plan and organise, and to draft. However, in the examination the examinees are working against time. This reasoning seems to be supported by the finding that there is only one instance of a Complex policy thesis among the analysed theses. The support built for such a thesis must provide sufficient and appropriate evidence both for the claim that one course of action must be abandoned and that another one must be adapted. This task may not be feasible not only because it is a taxing one concerning organisation and content generation, but also because there is a word limit set for the essay.

Simple policy theses are by far the most frequent thesis types. If the instances of positive and negative alternatives are added up, there are altogether 151 such thesis statements. The most likely reason for the high frequency of this thesis type is that more emphasis is laid on simple policy thesis types in the academic writing classes that the writers of the investigated argumentative essays attended. Furthermore, it is a comparatively less demanding task to generate ideas and organise them into a coherent body of supporting evidence for a single preferred course of action specified in the thesis statement.

The second most frequent thesis type the examinees opted for are Causal theses the two subtypes of which account for 29 theses in the investigated essays. It is beyond the scope of this study to examine the support built for causal claims, but it would help determine whether those examinees that chose Causal theses did so because they were skilled enough to construct an adequate body of evidence, or they opted for them because such theses better express the writer's argumentative stance and their essays would not become descriptive. Causal claims are considered to be one of the most difficult claim types to establish because the arguer must understand and discuss the implications of, for example, main, contributory, immediate, and remote causes (Kirszner & Mandell, 2004), and must be able to apply such methods of causal investigation as, for example, the common-factor or the single-difference method (Fahnestock & Secor, 2004).

On the basis of the sample selected for this preliminary pilot study, the third research question can be answered in the negative. The chi-square test performed to try and detect the effect of the prompt on the choice of thesis statements indicated no significant differences between the sets of thesis statements written on two different prompts administered in two semesters. Students in both semesters favoured especially policy and to a lesser extent causal types of theses and overall opted for positive non-relational thesis types. Given that in the argumentative essay task examinees are instructed to select a thematic aspect from the prompt, which provides them with a topic to which they can generate any controlling idea, the detailed analysis of the thematic aspects in the two prompts would most likely not help

explain the choice of controlling ideas which determine the category of the thesis statement. The analysis of the entire corpus may nevertheless provide different insights.

8   Conclusion

The main aim of this preliminary pilot study was to test the proposed taxonomy of argumentative thesis statements on thesis statements taken from a sample of argumentative essays selected from the Hungarian Corpus of Learner English. The results have shown that the taxonomy is comprehensive, its taxonomic scheme allows for the establishment of clear and logical categories which are mutually exclusive, it is easy to use, and that it is a useful tool for the study of argumentative thesis statements. The results have also revealed that some disambiguation work on the codebook is necessary, following which the proposed taxonomy can be turned into a teaching tool in order to familiarise students with the complete set of argumentative thesis types. One key feature of the proposed taxonomy, its exhaustiveness, has been established on the basis of the essay sample investigated. However, the analysis of the entire corpus and additional argumentative text taken from other corpora (e.g., International Corpus of Learner English) is necessary to warrant the claim that the taxonomy most probably features all the possible argumentative thesis types.

The frequency of the argumentative thesis types also indicates the necessity for a more systematic and comprehensive approach to the teaching of argumentative thesis types. With the help of the taxonomy, students can understand the difference between relational and non-relational theses and the implications of these thesis types concerning the idea generation, organising, and drafting processes. Although the taxonomy may seem rather complex, it is worth noting that even the most complex thesis types appeared in the corpus at least once; if students become familiar with the various relational and non-relational thesis types, they have the opportunity to generate a larger number of argumentative theses on the basis of one thematic aspect and then select the one which they can best develop into a convincing argument.

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