Annals of "Dunărea de Jos" University of GALAȚI
Fascicle XIII, New Series.
Issue 26, XXV, 2007

pp. 41-54

Language and Literature

THE ENGLISHNESS OF ESP TEXTS

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Introduction

It has been widely accepted that despite the 'English hospitality' to borrowings from other languages, the "Englishness" of the English vocabulary has remained untouched. In other words, we could rather say that the systematic features of the receiving language, i.e. English, have been generally imposed upon the foreign words, no matter their number. Therefore, our paper, which consists of two major sections, will fundamentally rely on Kurath's perspective, who considers that:

> *"The large-scale adoption of foreign words did not materially change the structure of English. The considerable simplification of Old English noun, adjective and verb forms exhibited in Chaucer's English is strictly an indigenous development […] The persistence of the English system of phonemes, grammatical forms, stress-patterns, and syntactic constructions is by no means unique."* (Kurath, 1969: 82-83)

1. Syntactic Density

One of the most relevant features attributed to the Englishness of ESP written texts is what O'Donnell 1974 calls 'syntactic density' being consistent with Halliday's 1985 'lexical density'. O'Donnell associates syntactic density with 'compactness in verbal organization' while Halliday supports the same idea by stating that it is the category of verbal structures, participles and gerunds which have the most contribution to lexical density, thus helping in obtaining a high degree of compression of meaning to the point where syntactic and morphological markers become absorbed in the lexicon, providing conciseness, exactness and objectivity to functional or specialized translations ((Nida 1982, Basnett-McGuire 1991, Croitoru 1996, 2004, Kozerenko 2003, etc).

In the sample texts under (1) participles and gerunds contribute to syntactic density facilitating the description of the processes and phenomena in a concise and precise manner.

a) Of the four mushrooms which are cultivated in quantity by man, by far the greatest amount of research and development has been conducted in connection with the Common Cultivated Mushroom, Agaricus bisporus […..] Stages in the commercial production of Agaricus bisporus are eight in number. They are as follows: (1) spore germination, (2) spawn **growing**, (3) **composting**, (4) **filling** and **sweating out**, (5) **spawning**, (6) **casing**, (7) **the cropping period** and (8) **packing** and **marketing**. (The Use of Fungi as Food and in Food Processing)

b) Alpha-chloroace tophenone (MACE) is a powerful lacrimator used in law enforcement and personal protection. In photochemical smog**, nonirritating air pollutants** are converted by irradiation to peroxyacyl nitrates, with **accompanying lacrimator** and **activity,** particularly in the smogs of Los Angeles and other cities of southwestern states. Eye

irritation, manifested by **itching, burning, swelling** and lacrimation, occurs commonly among nonsmokers passively exposed to cigarette smoke; acrolein and other agents in the smoke are the **offending chemicals.** (Toxicological Aspects of Energy Production)

We may consider that all the *–ing* forms underlined make up the field of Secondary Predication (non-finite verbal forms) bearing the features of verbal modifiers for the field of Primary Predication (finite verb-forms marked by Tense-Aspect-Voice)(Kozorenko, 2008)

The functional meanings they convey are *qualification* as denoted by the *participles* ***cropping period; nonirritating air pollutants; accompanying lacrimator*** and ***activity; offending chemicals*** or *taxis* i.e. ordering of actions as denoted by the following *gerunds*: *spawn* ***growing; composting; filling, sweating out; spawning; casing; packing, marketing; itching, burning, swelling.***

2. Lexical Density

In Halliday's opinion, lexical density can be quoted in connection with two different perspectives on reality and grammar:

> "The doric style, that of everyday, commonsense discourse, is characterized by a high degree of grammatical intricacy- a choreographic type of complexity… : it highlights processes, and the interdependence of one process on another. The attic style, that of emergent languages of science, displays a high degree of lexical density; its complexity is crystalline, and it highlights structures, and the interrelationships of their parts including, in a critical further development, conceptual structures, the taxonomies that helped to turn knowledge into science"(1988:85).

3. The Determination-System

Using taxonomies we organize scientific information by classifications: "In order to classify and organize with language we need, first of all, to turn phenomena into things or nouns" (Martin 1985: 36).

As Martin sustains, the *nominal group*, with its ability to be modified and its capacity of expressing a variety of relationships between phenomena can lead to Classifier ^ Thing compounds which give the coherent structure of most technical terms (Martin 1985). In addition, in the scientific text-samples under (1) the underlined nominal groups, either simple or complex, have the capacity to attribute to the former a social function by imparting information to non-specialists.

Nominalization is more functional in a science text than in everyday conversation and therefore the choice of using a noun-phrase, rather than a clause, to express a semantic process is more "natural" to the texts seen as "chunks" of information.

(1)

a) **Natural medicines** also are found in **plants** that grow outside **rain forests.** For example**, digitalis** comes from **a wildflower of Europe**, **the foxglove.** Digitalis slows and strengthens the heartbeat. (Science in the News)

b) The future looks promising for **wellness foods,** especially as consumers have never really taken to the term **functional food**s, and in many respects wellness foods promote the inherent goodness of the ingredients used […] (Food engineering and ingredients)

c) A number of chemicals at low concentrations are capable of causing **reflex tearing**; these chemicals are called lacrimators. At threshold dilutions, lacrimators cause **instant tearing** without tissue damage. (Toxicological Aspects of Energy Production)

In the sample-text (1)a, the nominal groups *plants, a wildflower of Europe, the foxglove* enter a taxonomic relationship with the superordinate *plant,* indicating the genus, followed, by the subordinates *a wildflower of Europe*, and *the foxglove*, indicating the species. *Digitalis* is the scientific renaming of the vernacular term *foxglove:* "Scientific taxonomising typically involves the renaming of vernacular terms in order to reclassify them into scientific taxonomies"(Martin, 1985:33).

In the sample- texts (1)b and (1)c, the compound words ***wellness foods, functional foods, reflex tearing*** and ***instant tearing*** are Classifier^Compounds and they express a cause- effect relationship.

As many linguists have pointed out (McKenna, 1997; Berwick, 2001) but perhaps most notably Quirk, Greenbaum, Leech, & Svartvik (1980: 84): "Scientific writing differs greatly from other styles in having a distinctly higher proportion of noun phrases with complexity". More recently, Godby 2002 clearly demonstrates the significance of noun phrases in the specific context of engineering writing.

Nominal compounds can perform a range of functions rendered by the semantics of the words and their arrangement into the phrase-structure i.e. the system determination through pre-and post-modification which would indicate development of the discourse. .Wells (1960: 217-218) also advocates the same kind of supremacy to nominalized structures since they provide ESP texts with at least three characteristics: a) impersonality; b) possible avoidance of finite verb forms; c) specialization and technicalization.

In the text-samples under (2) the linguistic structure of the nominal compounds underlined is a reflection of the variety of clausal forms from which they have been derived.

(2)

a) PBI Dansensor (17/B57) will be exhibiting a new **on-line leak detection system**; a new **on-line analyser f**or **gas/vacuum- based packaging machines** with many new features such as **automatic set-up** and **electronic gas mixer control**; new **film permeation testers** resulting from PB1 Dansensor's recent acquisition of **water vapour permeation tester supplie**r, Lyssy; and a brand new **oxygen permeation tester.**

(Food engineering and ingredients)

b) In the first place, truffles are **dark in color**, **warty in appearance** and **tuberous in shape**, and in the second place they grow only underground. Truffles do not even belong to the same class of fungi as the Common Cultivated Mushroom, since they are Ascomycetes not Basialiomycetes. Nevertheless they meet the requirements of a broad definition of mushrooms in that they are **edible fleshy fungi** and hence will be termed mushrooms [….]

(The Use of Fungi as Food and in Food Processing)

c) Duggar's method is a **tissue culture method** and can be quite easily performed with very little practice even by a novice. It merely involves breaking a **fresh, fleshy, leathery** or **gelatinous carpophore** and quickly transferring a small piece of **the inner tissue** from the **freshly-broken surface** to a suitable **sterile medium** with a **sterile transfer needle**.

(The Use of Fungi as Food and in Food Processing)

d) Based upon conditions in the Netherlands, Spoelstra has made suggestions regarding the air conditioning of mushroom houses .Beds may be of three types 1) **tray beds** in which the compost is placed to a depth of 4 to 5 inches in **individual wooden trays**; (2) **shelf beds** in which compost is placed to a depth of 5 to 8 inches on **wooden shelves** (with **side** and **end boards**) which are in tiers and separated from each other by a **vertical distance** of 2 to 2,5 feet; and (3) **French beds**, in which the bed is built directly on the ground to a height of 1 to 1.5 feet. (The Use of Fungi as Food and in Food Processing)

e) RPC Containers (9/F03) will be unveiling products from its three core manufacturing areas: injection molding, thermoforming and blow moulding. (Food engineering and ingredients)

In the quoted examples, an analysis of the determination system can lead to the following relationships between the head and its modifiers:

- operating principle, e.g., *on-line analyzer, film permeation testers, water vapour permeation tester supplier, oxygen permeation tester, injection molding, thermoforming, blow moulding*
- working substance in the operation, e.g.: *gas/vacuum- based packaging machines, water vapour permeation tester supplier, oxygen permeation tester*
- means of operation, e.g., *automatic set-up , electronic gas mixer control, injection moulding, thermoforming , blow moulding*
- characteristic working part, e.g., *freshly-broken surface , transfer needle*
- materials used, e.g., *wooden shelves, fresh, fleshy, leathery, gelatinous carpophore,*
- purpose, e.g., *edible fleshy fungi, core manufacturing areas*
- location, e.g., *freshly-broken surface, tray beds, individual wooden trays, shelf beds, side and end boards, vertical distance,*
- shape or form, e.g., *warty in appearance, tuberous in shape*
- colour, e.g., *dark in color*

The nominal modifiers in the NPs listed above make up the field of Attributiveness according to Kozorenko's model (2003) and their majority allow pre-modification.

4. The Use of Tenses

In what concerns the use of tenses with finite verbal forms (i.e. Primary Predication) in ESP texts, Lackstrom, Selinker and Trimble (1985) claim that tense choice is made on the basis of the notion of the degree of generality:

- the information is presented in the *past tense* when there is no claim to generality in support of a core idea .
- the information is presented in the *present perfect* when good generalizations about past events with no commitment about future events are made.
- the information is presented in the *present tense* when a more general claim is being made under the form of supporting reliable facts.

In the samples under (3) we can enlarge upon the uses of tenses by taking into account both the *degree of generality* that they express and the fact that the selection of tenses in technical prose are lexico-grammatical means to indicate *prominence* of the phenomena presented or *hierarchization* of classes of phenomena under discussion.

(3) For centuries, people in Asia and South America **have used** the roots of plants containing rotenone. Such plants **are called** tuba in Asia and barbasco in South America. Fishermen **throw** the cut-up roots into the water. The rotenone **paralyzes** the fish. They **rise** to the top, unable to move. They **are caught** easily. Rotenone **does not poison** the fish. And it **does not harm** humans. Scientists **experimented** with the substance. They **found** that it **killed** a number of kinds of insects. For more than 30 years now, rotenone **has been used** to keep insects away from crops. (Science in the News)

The opening and closing sentences in the text contain verbs used in the present perfect tense in order to make good generalizations about past events by indicating prominence of the phenomena presented: *have used* and *has used* modified by the adjuncts *For centuries, For*

more than 30 years now denote persistence in performing the same activity within a period prior to now and still going on, with no commitment to the future.
In the middle of the text supporting reliable facts are described using present simple tense: *are called, throw, paralyzes, rise, are caught, does not poison, does not harm.*

The verbs convey immediate factuality, each use being an immediate factual report, not conducive to change or development (Lewis, 1993).

Towards the end of the excerpt, two sentences, drawing to the concluding lines, contain past tense verb forms: *experimented*, *found* and *killed* which still conceptualize complete events factually but add a sense of remoteness in time.

Concluding Remark

The linguistic phenomena exemplified above in connection with the Englishness of ESP texts can become interesting starting points in the analysis of sources of transfer in the translation of ESP texts, topic which will be focalized on during future research.

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Abstract

Since its inception rooted in the general theory of register (Halliday 1978), the linguistic analysis of ESP has broadened to include syntactic and lexical choices, pragmatics, and elements of text organization and structure. Starting from various text-types the paper aims at illustrating cases of syntactic and lexical density and generalizing upon the Englishness of ESP register characteristics.

Résumé

L'approche que nous proposons représente l'analyse de la densité syntaxique et lexicale données par l'occurrence des groups nominaux et des formes verbales non-personnelles dans des textes scientifiques anglais. Le point de départ le représente plusieurs types de textes qui ont été choisis spécialement pour soutenir la démarche proposée.

Rezumat

Subiect consacrat, studiul limbii engleze pentru scopuri specifice este centrat in lucrare pe reliefarea catorva dintre caracteristicile specifice conceptului de Englishness. Acesta este analizat in functie de densitatea sintactica si lexicala conferita de ocurenta grupurilor nominale si a formelor verbale nepersonale intr-un corpus atent selectionat.