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ACADEMIC READING: THE IMPORTANCE OF BEING DETAIL-FOCUSED

The purpose of the study is to cast a fresh glance at the problems of academic reading, namely, those of points of reference, the transpositional use of the English tenses, and punctuation. Attention is drawn, in particular, to the use of the Present Perfect versus Past Simple. Pronouns 'which' and 'that' are analyzed in restrictive /non-restrictive relative clauses to show the ambiguity they create if used indiscriminately. Various functions of 'which' as a reference word are also dealt with. Comma is treated as a meaningful element causing misunderstanding and even wrong interpretation if not handled properly.

The issues raised in the paper may be of interest both to teachers and researchers learning to develop and hone their skills in professional reading.

Key words: academic reading, relative clause, pronoun, reference word.

У статті розглядаються питання, пов'язані з навчанням читання наукової літератури, які доволі часто не достатньо висвітлені під час роботи з академічним текстом. Увагу зосереджено на наступному: різниця у вживанні Present Perfect /Past Simple, слова-замісники which, that, it, пов'язані з цим випадки застосування анафори /катафори та ролі коми як смислорозрізнального елемента. Також аналізуються атрибутивні підрядні речення, що вводяться сполучниками which, that, where, when, у їхній подвійній ролі: restrictive /non-restrictive clauses. Роль коми перед which у зазначених типах речень є визначальною, тому увагу приділено і пунктуації.

Стаття може зацікавити як викладачів, так і науковців

Ключові слова: читання наукових тестів, підрядне речення, займенник, референтне слово.

В статье рассматриваются вопросы, связанные с обучением чтению научной литературы. Внимание фокусируется на следующем: различие в употреблении времён Present Perfect /Past Simple, слова-заместители which, that, it, случаи использования анафоры /катафоры и роль запятой как смысловозначительного элемента. Анализируются также атрибутивные придаточные предложения, с союзами which, that, where, when в их двойной роли: restrictive /non-restrictive clauses с точки зрения их двузначности. Внимание уделяется и роли запятой в этих предложениях.

Вопросы, поднятые в статье, могут привлечь внимание как преподавателей, так и научных работников.

Ключевые слова: чтение научных текстов, подчиненное предложение, местоимение, референтное слово.

The myth postgraduates have developed long before coming to the classroom is hard to disprove without strong evidence. The wrong preconception is that any academic text can be understood well if the reader is familiar with the vocabulary (basic terminology) of the problem (McWhorter, Sember, 2014, p. 2; De Chazal, 2014, pp. 6–18).

While there is some truth in that belief, the general argument proves to be erroneous on a closer inspection. Indeed, one can get a general idea of what the story is about, using key words as landmarks in their reading — scanning and skimming the text is based on that skill. Surely, it is of service if the purpose is to decide whether the article is worth choosing for consideration (as it is, say, in reading abstracts or even titles). But when it comes to hard things, that is finding answers to the questions of why, how, what exactly, precisely what, namely who /what, etc., the basic English skills will take one no further than that.

Details have always received but scant attention in the classroom and students' textbooks, whereas their importance in academic literature is hard to overestimate. One will not be far from the truth saying that they are the most crucial elements for a deep understanding. If that attitude is accepted, the student is likely not only to be a good reader, he will develop his writing skills as well and his other competences (listening, speaking) will improve significantly (Voeller, 2016, pp. 65, 153–163, 557–655).

So what are those details, the potholes that make the road to success so bumpy? We shall take for analysis just a few of them in the area of grammar and punctuation.

Among the English tenses, the Present Perfect, Past Simple, and Present Continuous deserve a particular comment (Williams, 2014, pp. 7–30; Declerck, 2015, pp. 19, 26–36).

One of the functions of the Present Perfect is to show that the process is completed and has a direct bearing on the present situation, its results are relevant for further activities (Kolln, 1999). This is the main meaning of the Present Perfect tense English grammar textbooks for postgraduates speak about, and for a good reason. This is important to bear in mind when one writes, say, an abstract, where the emphasis is on the results obtained and not on the process of writing. In the Methodology part, that is the techniques and approaches used, Past Simple is more appropriate because the methods employed belong to the so called history of the investigation and may not be of that relevance (Shahova, 1980, p. 193).

Being taught in this manner and with this focus, students make no distinction between *Special attention has been paid to the new properties of the substance* and *Special attention was paid to the new properties of the substance*. In both cases the translation would be *Особливу увагу було приділено новим властивостям цієї речовини* because they were taught the main meaning of the tense — *completion*. That is the reason they use the tenses (Present Perfect and Past Simple) interchangeably both in writing and speaking. It takes hours of practice to make them believe that *progression* is still another meaning of the Present Perfect, and the sentence may be translated as *Особливу увагу звертають (продовжують звертати) на нові властивості цієї речовини*, depending on the context.

The same is true about the Past Simple, which is taken by students to signify completion. Thus, *We conducted a series of tests* is invariably rendered as *Ми провели низку експериментів*, while the context may require progression (*Ми проводили багато експериментів*).

The lack of emphasis on this distinction may lead to a misinterpretation of the situation: one-time act versus repeated action, where the former is associated by the

students with Past Simple /Present Perfect (or even Past Perfect) and the latter with the Continuous tense. Compare the two sentences and their possible translation:

The evidence obtained showed disagreement with the calculated data. Отримані дані показали /показували розходження із попередніми розрахунками.

The context will tell the students which of the two variants is right if they are taught to suspect the double meaning of the tense form. In other words, the distinction between persistence of an action, on the one hand, and its one-time occurrence, on the other, does matter in many cases. So in covering the English Tenses topic in a grammar course for postgraduates, the teacher must not only offer the traditional one-sentence-translation work but demonstrate this ambiguity in different contexts, choosing longer passages for analysis (Williams, 2018, p. 21). Given below are some examples of this ambiguity from the original texts.

E.g.: An earlier study showed (*one-time act* — «показало», а не «показувало») that experimental rather than habitual restriction of sleep resulted in (*recurrence* — *призводило*) impaired glucose tolerance.

(Spiegel, Leprouet, 2018)

E.g.: All attempts seemed (*recurrence* — «здавалось», а не «здалось») to suggest that a theory able to solve this problem just seemed to create new theoretical issues (Salvio, 2015).

E.g.: Low vitamin D levels have also been linked (*recurrence* — «пов'язують») with a range of other conditions. (Sandiou, Johnson, 2016)

E.g.: Fatigue is usually associated with tensile stresses but fatigue cracks have been reported (*recurrence* — «повідомляється» /повідомлялось і продовжує повідомлятися) due to compressive loads. (Fleck, Shin, 2012)

E.g.: The focus on combating tax havens has been on common standard, transparency, and data sharing (*recurrent practice*). The rise of OECD corporate tax havens has led (*one-time act* — *призвело*) to criticism of this focus. (James, 2010)

E.g.: In the paper, larger models with additional pathways have been constructed (*one-time act* — *було побудовано*) using this technique. (Elder, 2010)

Another thing that would require students' vigilance is points of reference. At first glance, nothing special could be said about it. However, mistakes are commonplace in finding the antecedent or even not bothering to look for it at all. The trouble is caused by anaphoric and cataphoric use of pronouns (Schmolz, 2015).

The first and the most tricky substituting word is pronoun «it» (Wales, 1996). Unless a distinction is made between the different antecedents it may have, the pronoun will almost always be translated into Ukrainian as «це», which is far from being the only possible option. We suggest the following tactic in handling the problem. First, the teacher should bring home to the students the fact that «it» may have two antecedents:

1. «It» substitutes for a noun in singular, which may be masculine, feminine, and neutral, hence its translation as «цей /ця /це», «він/вона/воно?».

E.g.: A thorough investigation of nearest neighbor dependency of the quantum yield of a fluorescent thymine analogue is evaluated here for the first

time. It (*воно, це дослідження*) reveals that it (*quantum yield*) is brightest when flanked by thymines, and most quenched when flanked by guanines (*Nature*, 2018, Vol. 8, 13970).

E.g.: The eastern submarine slope of Flores has an overall logarithmic profile typical of the unfailed constructional flanks of a volcanic island. It (*він, цей схил*) appears relatively smoother, which may be due to the lower resolution of the bathymetric data in this distal portion (*Nature*, 2018, Vol. 8, 13898).

2. «It» may substitute not only for a noun but for an idea expressed before. In this case its Ukrainian equivalent is «це».

E.g.: Just below $I_{c,B}$ much of the tape is already in the critical state and it (*це*) is simply the last singular transition to the critical state near the centre that causes a discontinuity in $B_1(I, x)$ at all points x across the surface (*Nature*, 2018, Vol. 8, 14120).

E.g.: We conclude that $I_{c,B}$ remains the fundamental critical current irrespective of the presence of an externally applied magnetic field. Importantly, our calculations confirm that it coincides with the critical state abruptly reaching the centre of the tape. It does not, as it might appear, reflect a transition occurring simultaneously across the entire tape. (*Nature*, 2018, Vol. 8, 14463).

Another important point is that this pronoun may be used as an anticipatory element (cataphoric use) — it substitutes for an idea /group of words /one word that goes farther in the sentence. In this case ‘it’ is not translated. The same is true about ‘it’ in an emphatic frame construction (It is ... that).

E.g.: It is well-established (*добре відомо / встановлено, що ...*) that the reliable perception of depth depends on relative disparity signals, and that extrastriate mechanisms exist which pool disparity signals across space in order for this to be achieved (*Nature*, 2018, Vol. 8, 14120).

E.g.: It can be seen (*на картах можна бачити, що ...*) in the spatial factor maps that there are subtle differences in patterns in spatial factor coefficients from one year to the next, indicating changes may be driven by temporally changing environmental factors and species behavior (*Nature*, 2018, Vol. 8, 13886).

E.g.: It is this limit (*саме ця межа*) that most likely accounts for the inability of observers to segment the anti-correlated circular target from its surround in our experiments (*Nature*, 2018, Vol. 8, 14120).

The next step in training is for a teacher to point out to these differences each time «it» occurs in the text. This will develop the habit of analyzing the text, seeing more than just the first few words.

A word must be said about the tendency in the English language to use a pronoun first and then its noun. This is not typical of the Ukrainian language and makes students look for the antecedent in the text before the pronoun, whereas here again we observe a cataphoric function of «it» (Kirsznner, Mandell, 2012).

E.g.: Moreover, PC12 cell line derived from rat pheochromocytoma, with embryological origin similarly to neuroblastic cells, can easily differentiate into neuron-like cells. When they (*коли ці клітини культивували*) were cultured in reduced oxygen (1 %, 4 %, or 12 % oxygen) these cells exhibited (*вони*

продемонстрували) significant increases in neurite extension and total neurite length (*Nature*, 2018, Vol. 8, 14440).

The correct way to choose in translating such sentences is to find the substituted noun and translate it first, and then repeat it as a pronoun (*Коли ці клітини ..., вони ...*).

Pronoun «which» is still another snag in the course of academic reading. A remark to make from the outset is that students tend to overuse «which», preferring it to pronoun «that». Indeed, these two can be used interchangeably but with some restrictions, which the teacher must not overlook during training.

Nevertheless, analysis shows that «which» as a relative pronoun is less frequent than pronoun «that». This is due to some reasons concerning the specific functions of «which» in the sentence. The tricky nature of this pronoun — if one is not familiar with it and thus ignores it — is a cause of serious trouble in understanding the text and leads to ambiguity or even wrong interpretation of the given information.

First, «which» as a conjunction is an element introducing not only a relative /attributive sub-clause but also a clause of result, where the predicate is often a verb of mental perception, such as *to suggest, to imply, to signify, to mean*.

The temperature is not rising, which means that ... / which is still another indication of ... / which suggest that, etc.

E.g.: Some of the lowermost lava flows have a steep westward dip, up to 40° (Figs 2 and 3), which implies (*що говорить про те, що /і це свідчить про те, що*) that the lavas flowed over a steep topography, here interpreted as the continuation of S2 to the SSE (*Nature*, 2018, Vol. 8, 13898).

E.g.: Hibernators are often well hidden in underground burrows, motionless, cold, and with minimal release of odour, which increases (*що збільшує /і це збільшує*) their average monthly survival to nearly 100% (*Nature*, 2018, Vol. 8, 13801).

Some ways to render a sub-clause of result with conjunction «which» in Ukrainian are: *все це дає підстави говорити про; що вказує на; це свідчить про; а це не так просто помітити*, etc. It is clear that in this function the antecedent of «which» is the whole idea expressed in the main clause (not one word /noun phrase), which makes the use of the Ukrainian equivalent «який» improper and irrelevant.

Furthermore, as a relative pronoun, «which» is hard to deal with due to its ambivalence — it may introduce both restrictive and non-restrictive clauses. In a restrictive attributive /relative clause, this pronoun replaces a noun /noun phrase in the main clause, which is its antecedent. Incidentally, pronoun «that» may also be used in this restrictive function. So *який /що /котрий* are suitable Ukrainian equivalents (Stevenson, 2012, p. 7–13).

E.g.: The early evidence suggests that Pythagoras presented a cosmos that (*який /що /котрий*) was structured according to moral principles and significant numerical relationships (Zafta, 2009, p. 222).

E.g.: From this standpoint a question arises of what are the properties of algebraic curves which (*які /що /котрі*) become invariant for such transformation (Fiske, 1999, p. 6).

However, these equivalents do not fit when «which» introduces a non-restrictive attributive clause. This clause may not necessarily identify the noun it modifies but gives additional information about the antecedent. Besides, the information in the non-restrictive clause may concern not just that particular antecedent; it may be a description of the whole class of such elements.

E.g.: cf. We can eliminate the first possibility of persistent differences between individuals that (які) died young and those with high longevity because we adjusted all analyses for age at death, which had (що мало / і це мало) only a weak impact. Further, high body mass did not lead to an earlier emergence from hibernation, which (доречі, це узгоджується / що узгоджується) is in line with earlier findings (*Nature*, 2018, Vol. 8, 13801).

E.g.: The bathymetric grid, which (а вона, доречі, має ...) has an X-Y spacing varying from ca 100*100 m in the proximal offshore domain to 230*230 m in the distal western sector, is useful for analyzing the first-order main morphological features (*Nature*, 2018, Vol. 8, 13886).

E.g.: Our results demonstrate how timing of hibernation, which (а вона, доречі, є ...) is an integral part of the timing of reproduction, is adjusted presumably to reflect a shift in the optimal solution for a cost/benefit trade-off over the lifespan of a hibernating mammal (*Nature*, 2018, Vol. 8, 13801).

Ukrainian equivalents of «which» in that function could be: причому всі вони ...; а такі похибки ...; доречі, вони ..., etc.

E.g.: A mechanism for decoupling exploitation of species caught together is spatial targeting, which remains (і він залишається, причому він залишається) challenging due to complex fishery and population dynamics (*Nature*, 2018, Vol. 8, 13886).

E.g.: A preliminary photophysical analysis of these thymine PNA monomers revealed similarities to the bright and stable donors tC and tC°, which we previously reported (про що ми повідомляли /а ми про них вже повідомляли), for instance, as part of the first FBA FRET-pair (*Nature*, 2018, Vol.8, 13970).

It is useful to note that pronoun «that» never introduces a non-restrictive attributive clause.

As a training practice to teach this ambiguity, we suggest the following technique. Offer the class an exercise where they are to combine separate parts (simple sentences) into one complex sentence, using «which» as a conjunction of a restrictive or non-restrictive clause, according to the context. Point out that in the former case (a restrictive clause) it can be replaced by «that».

a) *The professor has cited an article.*

This article speaks about the medical computer revolution.

The professor has cited the article which /that speaks about the medical computer revolution. (Here the attributive clause is restrictive, so «which» and «that» can be used interchangeably.)

b) *The sun is one of the earth's sources of power.*

The sun can produce enough solar energy to meet man's needs for a year.

The sun, which can produce enough solar energy to meet man's needs for a year, is one of the earth's sources of power. (The attributive clause here is non-restrictive, so «which» is the only option. Note the use of comma — more of this below.)

Pronoun «which» is not the only one to introduce a non-restrictive sub-clause; there are also «where», «when», and «whose». The approach to those is similar.

Compare the sentences, where a) is with a restrictive sub-clause and b) with a non-restrictive sub-clause.

a) *I was born in this city.*

This city is an industrial centre of the country.

The city where I was born is an industrial centre of the country.

b) *I was born in Kyiv.*

Kyiv is an ancient city.

Kyiv, where I was born, is an ancient city.

a) *An earthquake hit the village.*

There were a large number of victims.

There were a large number of victims when an earthquake hit the village.

b) *Many people exchange gifts on December 25.*

Christians celebrate the birth of Jesus Christ on December 25.

Many people exchange gifts on December 25, when Christians celebrate the birth of Jesus Christ.

a) *A research laboratory's status and reputation are high.*

A research laboratory may expect investments from business.

A research laboratory whose status and reputation are high may expect investments from business.

b) *Independent research laboratories test many new products on the market.*

Consumers trust their evaluations.

Independent research laboratories, whose evaluations consumers trust, test many new products on the market.

A few words should be said about punctuation in «which»- and «that»-clauses. Long-term teaching experience has shown that students tend to put a comma indiscriminately, before any sub-clause, being driven by the rules of Ukrainian syntax, or, which is still worse, ignore it completely. The use of comma thus remains a stumbling block in acquiring solid competence in academic reading and writing.

The problem of punctuation being vast and complex, we shall limit our analysis to «which»-clauses, both attributive clauses and clauses of result. A simple rule about the punctuation of sub-clauses of result introduced by «which» is that they are always separated from the main clause by a comma (see the examples above).

As to attributive clauses, it should be emphasized that a comma /no comma there is crucial for understanding. If the author is careless in his punctuation, editors and proofreaders go through hard times, racking their brains over the dilemma — does «which» in this case identify that particular noun /noun phrase (a restrictive use of «which») or does it give additional information about the object /the whole class of such objects (non-restrictive use of «which»). Compare the sentences:

a) *Companies will invest in the country which is successful in its reforms.*
(Компанії будуть інвестувати в таку країну, яка успішно проводить реформи.)

b) *Companies will invest in the country, which is successful in its reforms.*
(Компанії будуть інвестувати в цю країну, адже вона успішно проводить реформи.)

As it is seen from the examples above, negligence in such cases will result in misinterpretation of intended message.

To conclude, being familiar with terminology on the subject is not the most important prerequisite, though indispensable; «details « in reading professional literature may turn out to be decisive.

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