

Variation in translating from a language without articles
into a language with articles:
the case of Russian to English translation

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1. Morphologization of meaning

If morphemes are language units that explicitly encode meanings, then the same meanings are not treated by all languages equally. It is well known that some complex meanings, depending on the language, may be one morpheme (Ch¹ 姑), two morphemes (J *shuuto-me*, R *svekr-ov'*), or three morphemes (E *mother-in-law*). In a language where morphologization of a certain complex meaning is absent, it may take a clause or a sentence to convey it. It is also well known that some meanings may have no designated morpheme in some languages, while in other languages the corresponding morpheme exists and is, moreover obligatory. Consider the distinctions in (1):

(1)	Plurality	J <i>-tachi</i> (in humans, anim.)	R <i>-i/a</i>	E <i>-s</i>
	Animacy	J none	R <i>-a</i> (in m. acc. sg.)	E none
	Referential gender	J ?	R f. <i>-k-</i> , <i>-in'</i> , <i>-š-</i>	E <i>-ess?</i>
	Assertion strength ²	J ?	R <i>ved'/že</i>	E tags?

This is by far not a definitive list, as can be seen from the question marks and parenthesized information alone. The list is also subject to historical change, as every Slavist knows e.g. from the demorphologization of the dual number. Any existing variation is potentially a change in progress: the usage of *-tachi* in Japanese has been noticeably increasing to include nonhuman animate nouns (*tori-tachi* 'birds') and even some inanimates (*hana-tachi* 'flowers'). The feminizing morphemes in English and

¹ The abbreviations that appear before the examples refer to the following languages: Ch = Chinese, E = English, J = Japanese, R = Russian.

² This is a working label in the interest of concision.

Russian (and to some extent in Japanese) are, conversely, undergoing a reduction in their usage for ideological reasons. Even the traditional “grammatical” meanings are thus subject to variation based on pragmatic factors.

Morphologization of discourse meanings is more often optional than obligatory (although the Bulgarian evidential – clearly a discourse morpheme – is usually considered to be part of the grammatical meaning, hence arguably obligatory). The number of discourse morphemes in some languages – one of them being Russian – is great, while defining the meaning of each one of them is a challenging task that can easily take a monograph.³ Discourse particles are the most obvious cases of morphologized discourse meanings, but a complete range of discourse meanings and their linguistic encoding is a major problem yet to be tackled by linguists.⁴ Because of the incomparable complexity of discourse meanings – when compared to the traditional “grammatical meanings” – their cross-linguistic mapping is far more challenging than mapping of cross-linguistic correspondences of number or gender.

2. Cross-linguistic equivalence as a translation problem

Since translation has been deliberately practiced for over two millennia, specialists in many fields – from philosophers to theologians to poets – have had a say in the matters pertaining to its theory and practice. This is not the place to argue which of the many equivalences proposed hitherto – denotative, connotative, text normative, pragmatic, formal-aesthetic, communicative, or text-organizational, inter alia – is the most appropriate.⁵ What interests us here is the empirical problem of mapping meanings for which there are no morphemes in the source language into a target language in which they are obligatorily expressed by morphological means as closely as possible. Tirkkonen-Condit points out that items that do not exist in the source text but do exist in the target language (Finnish, in her case) are underrepresented in the

³ Cf. Parrott’s 1997 analysis and description of just two Russian particles: Lillian Arendell Parrott, *Discourse Organization and Inference: The Usage of the Russian Particles Že and Ved’* (Harvard University: UMI Dissertation Services, 1997).

⁴ See Dunkel’s 2014 two volume lexicon of Indo-European particles alone: George E. Dunkel, *Lexikon der indogermanischen Partikeln und Pronominalstämme* (Heidelberg: Winter Verlag, 2014).

⁵ One classical definition may suffice for our purpose, however general it is: “Translation equivalence occurs when an SL (source language: OTY) and a TL (target language: OTY) text or item are relatable to (at least some of) the same features of substance”. John C. Catford, *A Linguistic Theory of Translation* (London-New York: Oxford University Press, 1965), p.50.

translations into Finnish. She explains this by the general tendency of the translating process to take place literally; such items “do not appear in the bilingual mental dictionary and there is nothing in the source text that would trigger them off as immediate equivalents”⁶. Our problem, however, cannot be either solved or avoided by simply leaving demorphologized source meaning incorporeal in the target text, since in the material we consider in this paper this meaning is obligatorily morphologized in the target language.

It is challenging enough to go from the Russian *Ja ved' govorila!* to the English *?I told you!* It is even harder to be certain that the English *I told you!* has its perfect equivalent in the Russian *Ja ved' govorila!* And when one thinks of the difference between R *Ja ved' govorila!* and R *Ja že govorila!*, the task of translating either of these two phrases into English becomes even more precarious. While translating into Russian without resorting to discourse particles like *ved'* incurs a cost in naturalness, a Russian sentence without *ved'* remains grammatical, if stiffer or less nuanced. But translating into English without resorting to articles like *a* or *the* results in distinctly un-English sentences. This is because the discourse categories encoded by these “particles” in English happen to be obligatory and “grammatical”. To compound the difficulty, the meaning of English articles still awaits a complete description, making them virtually unteachable to speakers of article-less languages for the time being. Translation from Russian, a language that lacks articles, into English, a language in which articles are obligatory, thus constitutes an almost unsurmountable task. I will consider in this paper a subset of problems arising in some cases of just such translation.

3. Discourse meaning of English articles

A basic understanding of English articles *Ø/a/the* will be assumed here, but first I must briefly consider three relatively sophisticated specific discourse features of English article use. The first is the relationship between the articles and the point of view, the second is the relationship between the articles and the “frame” the speaker has in mind, and the third is the non-referential usage of the *Ø* article.

⁶ Sonja Tirkkonen-Condit, “Unique items – Over- or under-represented in translated language?” In A. Mauranen and P. Kujamäki, eds., *Translation Universals. Do they exist?* (Amsterdam: Benjamins, 2004), pp.177–184: p.183.

3-1. The articles and the point of view

Consider the following simple narrative:

(2) As soon as they passed through the zoo gate, the mother bought Billy *a beautiful red balloon*. Billy wanted to hold it in his hands and let go of the string before the mother had a chance to tie it around his wrist. *The balloon* slipped away and was out of reach immediately. Leaving the crying Billy down below, it sailed high into the sky.

A while later, near another entrance into the zoo, Sofie was walking holding her grandmother's hand. She looked over the tree tops and saw *a red balloon* floating above them.

The distribution of the articles *a* and *the* in this short narrative is quite complex. The narrator knows, and the reader guesses, that the balloon Sofie saw was the balloon Billy let go. If the narrator's point of view remained consistent, the balloon Sofie saw would have *the* rather than *a*. The indefinite article encodes the point of view of the girl, for whom the balloon was an unfamiliar entity. The articles are thus shifters, to use Jakobson's term that describes a key discourse pragmatic element of language before discourse grammar existed as a field of inquiry⁷. Notably, the phrase "saw *a red balloon* floating above them" is appropriately rendered into Russian as *uvidela plyvuščij nad nimi krasnyj šarik* '(lit.) saw floating above them red balloon'. An alternative rendition in Russian of the girl's discovery of the balloon, one that reflects her subjective surprise more immediately, would be to use sentential stress and the corresponding word order (see sec. 6. below): *uvidela KRASNYJ ŠARIK nad nimi* '(lit.) saw red balloon above them'.

3-2. The articles and the speakers' frames

It is known that *the* goes not only with anaphoric nouns but also with nouns that were never mentioned but are implied by the previously mentioned nouns. Consider the following contrasts:

⁷ Roman Jakobson, "Shifters, verbal categories, and the Russian Verb," *Selected Writings II: Word and Language* (The Hague-Paris: Mouton, 1957), pp. 130-147.

(3) I took a bus to Ufa. The driver didn't have any change. / *The cash-registers were all broken.

(4) I went to the library last week. The stacks were closed. / *The mice were happily running around in the tank. / *The driver didn't have any change. / *The cash-registers were all broken.

(5) I went to the lab today. The assistants were all gone. / ?The mice were happily running around in the tank. / *The dogs were still at the kennel. / *The stacks were all closed.

The acceptability of the definite articles in examples (3)-(5) varies greatly, being correlated with the acceptability of implication in each case. The implication must fit in Fillmore's "frames"⁸, or, to put it in Yokoyama's (1986) terms⁹, it must constitute acceptable "associated knowledge". In (3), the frame BUS includes DRIVER, but not CASH REGISTER; the frame LIBRARY includes STACKS, but not MICE, DRIVER, or CASH-REGISTERS; the frame LAB contains ASSISTANTS, but not STACKS or DOGS, though possibly MICE. This would be the "normal" intuition of English native speakers, except in the case of those familiar with Pavlov's labs: DOGS were indeed part of the frame PAVLOV'S LAB.

As is clear from (3)-(5), it is insufficient to say that the acceptability of "the + noun" depends on the frame inclusion of the noun in question, because the frame itself is a shifter; it depends not only on the sense shared by all the speakers of the language but on the sense shared by the interlocutors of a given discourse.¹⁰

3-3. Zero article in non-referential expressions

⁸ Charles J. Fillmore, "Frame semantics," *Linguistics in the morning calm* (Seoul: Hanshin Publishing, 1982), pp.111-137.

⁹ Olga T. Yokoyama, *Discourse and Word Order* (Amsterdam-Philadelphia: Benjamins, 1986), pp.133-135 and passim. Russian tr. *Йокояма О. Когнитивная модель дискурса и русский порядок слов* (Перевод Г.Е. Крейдлина). М., 2005. С.176-179.

¹⁰ The Fillmorean notion of frames would benefit from a systematic incorporation of discourse-dependency as the key to determining the set of implications contained in a frame. Ultimately, frames can be created on the spot by speech, whereby explicit mentions of various entities and propositions emerge as a newly constructed frame filled with anaphoric members. Closer to Fillmore's original "frames" are those composed of non-anaphoric members; these are conventionally shared by communities of practice as small as friendship groups and as big as whole languages or even cultural grids.

The school grammar knowledge of the \emptyset article tells us that when a noun does not refer to an entity in one of the possible worlds, but rather denotes an action associated with that noun, \emptyset article is used. This accounts for the unacceptability of the plural version of \emptyset in (7):

- (6) go to \emptyset church / go to a church / go to the church
(7) *go to churches / go to churches / go to the churches

In the \emptyset option in (6), *church* is not a referential expression, it does not refer to an entity existing in the real world; *to go to church* means to go to do things they typically do in churches. This is why there is no plural possible when this non-referential meaning is intended, as in (8):

- (8) On Sundays, all good Catholics go to church / *churches /*the church(es).

Significantly, this usage is also a shifter, for the abstract meaning of \emptyset *church* is not available in English for houses of worship of other religions; consider (9):

- (9) go to * \emptyset / a mosque / a temple¹¹ / a shrine

The usage of \emptyset as in the phrase *go to \emptyset church* is unproductive in English, as can be seen from (10):

- (10) go to \emptyset school / go to work / * \emptyset ? lab /* \emptyset ? market¹² / * \emptyset concert /* \emptyset store /* \emptyset station /* \emptyset conservatory /* \emptyset lake /* \emptyset woods /* \emptyset pool

Note, however, that the referential-non-referential distinction is important beyond this idiomatic usage. Non-referential nouns behave in ways different from those that are referential. Just as in English the non-referential *president* lacks an article in *they elected him president*, the non-referential Russian *soldaty* ‘soldiers’ – generally an animate referential noun – behaves as inanimate in *ego vzjali v soldaty* ‘they drafted him’.¹³

¹¹ *Go to shul* is, however, acceptable if the speaker is an American Jew.

¹² Cf. *To market, to market to buy a fat pig* in a nursery rhyme; I thank Andrea W. Mates for pointing this example to me.

¹³ Cf. also R *U nee est' / \emptyset deti* ‘(lit.) At her are / \emptyset children’; the latter \emptyset variant is due to the non-referential meaning of *deti* ‘children’, rendered ‘with children’. *U nego žena, deti*. ‘He is married, with children.’

Inanimate nouns, both concrete and abstract, can be referential: *a/the book*, *a/the killing*, *an/the experiment*. Referential deverbal inanimate nouns refer to discrete events or specific states.

4. Imposition

Imposition is a universal cognitive discourse act pivotal for the material presented in this paper¹⁴. In a nutshell, this act by the speaker consists of forming his/her utterance in such a way that it reflects his/her own self-centered assumptions about the addressee's state of knowledge or attention, with disregard to the real discourse situation. A question like *Where is that thing?* uttered in the absence of any evidence that the addressee knows what *that thing* refers to would be a common case of imposition. It imposes the referential knowledge of *that thing* onto the addressee, i.e. the speaker has selected his/her referential expression *that thing* in such a way that ignores the possibility that the addressee has no idea what *that thing* refers to. To avoid being impositional, the speaker would have to say something along the lines of *Where is the ticket you bought yesterday?*

Some impositions are more acceptable/reasonable, while others may be more outrageous and cause communicational malfunction. The addressee may quickly figure out what the speaker meant by *that thing*, or may ask for clarification (*What/which thing?*), or s/he may indignantly refuse to respond to such a smug question. The acceptable versions of examples (3)-(5) are in fact cases of reasonable imposition. There really is no objective evidence that the addressee assumes that DRIVER is implied by BUS or that s/he is thinking of the driver at the moment. It is only the speaker's reasonable assumption that the addressee shares his/her frame content, even though an addressee coming from a world of driverless buses may not share it. The variable acceptability of the frames in (3)-(5) ranges from the near certain for a given community of linguistic practice to a narrower probability of people familiar with biological labs in the example with mice, to an even narrower probability of people familiar with the situation in Pavlov's labs that primarily worked with dogs. It is this

describes him, rather than introducing the referential entities *žena* 'wife' and *deti* 'children' into the universe of discourse.

¹⁴ For an in-depth discussion of imposition, see Yokoyama, *Discourse and Word Order*, pp.59-66.

gradual narrowing of the probability that is reflected in the range of acceptabilities in (5).

Example (2) in 3.1 shows another important feature of imposition. When the addressee tries to correct a communicative problem caused by imposition just described and asks *What thing?*, the addressee takes advantage of a discourse contract of sorts that exists between peer interlocutors. In this case, the contract allows the addressee to straighten the situation by asking for an exact reference of *that thing*. Contracts differ depending on the discourse type. When coming across an unfamiliar reference, say, in a novel, the reader will not try to correct it by asking the author. Instead, the reader lets go, figures it out on his/her own, or puts up with the lack of clarity. This is because the reader-author contract does not assume peer relationship the way contracts are between normal interlocutors. Example (2) is a narrative, and its reader has given up his/her freedom to question the author's discourse-related decisions. When the narrator chooses to shift to Sofie's point of view – and this is signaled by Sofie's topic status and by beginning the sentence in question with *She looked over the tree tops* – the reader abandons his/her own familiarity with the red balloon established in the previous paragraph and accepts the narrator's decision to refer to the balloon as *a balloon*. In fact, if the continuation the reader sees were instead *saw the red balloon floating above them*, the reader would find it jarring. Overriding the girl's perspective that was just established would constitute an unacceptable level of imposition on the narrator's side.

Impositions are important to take into account because they are common discourse acts by speakers. But being also part of bilateral discourse activity, they can be controlled by the addressee and/or by the convention (contracts). We will now examine how this all plays out in actual translation from Russian into English.

5. The data

In the remainder of this paper, we analyze some translation examples of I.P. Pavlov's scientific texts. The source is Pavlov's renowned *Dvadcatiletnij opyt ob'ektivnogo izučeniya vysšej nervnoj dejatel'nosti životnyh*¹⁵. The extant English

¹⁵ Павлов И.П. Двадцатилетний опыт объективного изучения высшей нервной деятельности животных. 1-е изд. М.-Петроград, 1923. The examples in this paper follows the 1951 Soviet Academy edition: Павлов И.П. Полное собрание сочинений. Т. 3, кн. 1, кн. 2. М.-Л.

translation of this major work by W. Horsley Gantt (1928, 1941)¹⁶ is incomplete. Several of Pavlov's papers translated by S. Belsky (SB) and then edited by J. Gibbons are included in the 1955 *I.P. Pavlov Selected Works* (example (19) cites SB's translation)¹⁷. As an additional data source, I use my own unpublished translation drafts (OTY) edited by an American professional science editor (PSE) in 2018. Examples in this paper were specifically selected out of a large number of cases where the solutions concerning the choice of articles differed between two translations, mostly those of Gantt and PSE. The striking fact that emerged from comparing these solutions was that disagreements about which article should be used occurred between these two native speakers quite often. It is this variation that will be addressed below.

6. Explaining the translation variation

The variations are grouped in this paper by what I suggest are the reasons for the translators' disagreement. Analysis shows that the translators' decisions concerning article choice were impacted by at least five factors: (a) the extent of context retention in reading the source text, (b) the readiness to accept the impositions of Pavlov's worldview or (c) his scientific frames, (d) the depth of subject matter needed to understand the original, (e) the ability to take Russian intonation into account. I will consider these five groups below in sections 6.a - 6.e, respectively. The examples will begin with Pavlov's original text in Cyrillic, followed by the relevant English translations. The noun phrases in question are boldfaced; all other differences in translation decisions made by the translators are ignored.

a. Retention of distant antecedents

After an entity has been mentioned, it is the standard rule of English that on the second and later mentions either *the* or a pronoun is used. This presents no problem in

¹⁶ Ivan P. Pavlov, *Lectures on Conditioned Reflexes*, v. 1. Tr. by W. Horsley Gantt (New York: International Publishers, 1928) [abbreviated here as WHG 1]; *Lectures on Conditioned Reflexes*, v. 2.: *Conditioned Reflexes and Psychiatry*. Tr. by W. Horsley Gantt (London: Lawrence & Wishart, Ltd., 1941) [abbreviated here as WHG 2].

¹⁷ Ivan P. Pavlov, *Selected Works*. Tr. By S. Belsky, tr. ed. by J. Gibbons (Moscow: Foreign Languages Publishing House, 1955).

cases like the first paragraph in (2), where the first mention, the antecedent, is not very distant from the second or third mentions. But the distance between the first and the subsequent mentions may be quite long, and this can cause retention problems. One context in which variation happens in our data is when *the* depends on a distant antecedent. Consider (11):

(11) Не менее тонко **отличение** длины промежутков или числа повторяющихся в единицу времени звуков. (1.141)¹⁸

No less refined is **differentiation** of the interval lengths or of the number of sounds repeated during a unit of time. (PSE)

Not less delicate is **the differentiation** of the intervals of time, i.e. the pauses between the separate sound stimuli. (WHG 1.140)¹⁹

In the preceding context, the discussion of different kinds of differentiation phenomena begins over a page earlier, the pitch differentiation being the first one discussed. Then follows the differentiation of sound amplitude. The sentence in (11) begins the next paragraph, which is about the differentiation of interval length. Each kind of differentiation is discussed in physiological terms. The context immediately preceding (11) does not contain simple, easily decodable direct references to the acuity of *differentiation* as such. The thread of the discussion progressing from the differentiation of pitch to that of amplitude, and now to that of interval length – while discernible with focused reading and thorough comprehension of the situation – requires keeping in mind the other kinds of differentiation. This is what the author (Pavlov) does, and this is what he counts on in the reader. While this may be impositional, the imposition is entirely reasonable, given the preceding one and a half pages in their physiological context. WHG makes the same (reasonable) imposition on the reader by choosing *the*. PSE, however, evidently does not find it acceptable,

¹⁸ The parenthesized information after the Russian examples refers to *Павлов. Полное собрание*. Т. 3; the first number (1 or 2), corresponds to Part 1 (кн.1) or Part 2 (кн.2) of volume 3, the second number is the page.

¹⁹ WHG refers to Gantt's translations, the first number refers to the volume (1 or 2) and the second number is the page.

dissociating the preceding context from sentence (11) by using the non-referential \emptyset article.

Now consider another example of distant antecedence:

(12) Что касается до **другой деятельности**, вызываемой **другими анализаторами**, то, так как повреждение их не коснулось, она остается в полной исправности. (1.176)

As for **other activities** evoked through **other analyzers**, given that the damage has not affected them, they remain fully functional. (PSE)

Everything relating to **the higher activities** effected through **the other analyzers** remains undisturbed; these analyzers are intact. (WHG 1.167-8)

In the preceding three pages, Pavlov describes experiments with three analyzers: the skin analyzer, the ear analyzer, and the nose analyzer. The skin analyzer has been destroyed, with corresponding results in the dog's behavior. When the other two analyzers – the intact ones – are tested, no disruption is seen in the behavior. The sentence in (12) appears in the discussion of these results, where it recapitulates the results produced by all the three analyzers. Specifically, it follows Pavlov's explanation of the aberrant behavior caused by the destruction of the skin analyzer. The antecedents of the activities produced by the ear and nose analyzers, as well as the analyzers themselves, are fully anaphoric over the scope of the preceding three pages. PSE does not recognize them as such and chooses indefinite plural zero, but WHG does, choosing *the*.

b. Acceptance of Pavlov's imposed views on life or science

Pavlov held strong progressive views on life and equally strong deterministic views on natural science. He took his beliefs for granted and didn't always bother to state them explicitly as such; this shows in examples (13) and (14):

(13) Конечно, эти состояния есть для нас первостепенная действительность, они направляют нашу ежедневную жизнь, они обуславливают **прогресс** человеческого общежития. (1.244)

Of course, these states are a paramount reality for us as they guide our daily life; they make **progress** in human coexistence possible. (PSE)

Certainly these states for us are a reality of the first order, they give direction to our daily life, they condition **the progress** of human society. (WHG 1.219)

The sentence summarizes Pavlov's thinking about the importance of subjective states of mind for human society. For him, social progress is a given, and WHG encodes this world view using *the*. PSE, on the other hand, does not presuppose its existence, treats *progress* as a non-referential noun, and chooses no article (just as WHG does in the preceding clause of same sentence in *give direction* for *направляют*).

(14) Деятельность больших полушарий, как это, вероятно, большинству из присутствующих известно, мы изучаем в настоящее время объективным путем, т.е. совершенно не пользуясь при анализе изучаемых явлений психологическими понятиями, а исключительно только сопоставляя **внешние факты**, т.е. явления внешнего мира и **ответную реакцию** животного. (1.160)

As most of those present today must know, we have studied cerebrum activity using objective means, that is, not using any psychological concepts in our analysis of the phenomena, but instead by juxtaposing only **the observable facts**: the phenomena of the outer world and **corresponding reactions** of the animal. (PSE)

As most of you know, the activity of the hemispheres is now being studied by us in an objective way, i.e., without making use of any psychological conception in the analysis of the phenomena, but by comparing only **external facts**, viz., the phenomena of the external world with **the reaction** of the animal. (WHG 1.156)

This sentence comes from the first paragraph of one of the many papers Pavlov presented at the Society of Russian Physicians. These talks usually navigated the delicate balance between the simplification necessary for some theoretically

unsophisticated or uninformed practitioners of medicine and the more complex physiological information intended to challenge and educate them. In this general introductory statement, Pavlov is, appropriately, non-impositional. He describes his research method that uses objective observation (*сопоставляя внешние факты* ‘(lit.) juxtaposing external facts’), and in the next phrase goes a step further to specify the objects of observation as the phenomena that happen in the world outside the animal and the animal’s reaction to them. The choice of the article before *observable/external facts* then depends on whether or not to impose the reference of these facts on the audience/readership: WHG chose not to impose and used the indefinite plural \emptyset , while PSE’s version is impositional, evidently using *the* in anticipation of the explanation provided in the text following the colon. What led to opposite decisions by the translators in the next clause, on the other hand, was Pavlov’s views on nature. The definite article before *corresponding reactions* is motivated by appreciating Pavlov’s deterministic views of nature: every reaction is caused by something, every phenomenon has a cause. Hence in response to every action of the outer world upon the animal there is a specific reaction by the animal, *the* corresponding reaction that implicitly asserts the deterministic view of action-reaction pairing. PSE’s zero here does not presuppose this view.²⁰

c. Acceptance of imposed frames

As argued in examples (3) - (5), frames differ, depending on who they belong to – city dwellers today, students, biology lab members, or Pavlov’s research teams. For the articles to be perceived as felicitous, the frames must be shared between the author/narrator and the reader. Consider example (15) with its straightforwardly Pavlovian frame:

(15) На наличном раздражителе должно развиваться задерживание, а из **следа** этого раздражения должен образоваться раздражитель для кислоты.

The on-going stimulus is supposed to cause inhibition, but **a trace** of the same stimulus is supposed to become an excitant for acid. (PSE)

²⁰ PSE’s solution may also, however, be a case of the deletion of the second *the* in a conjoined phrase structured as “*the (A + B)*”, *the (phenomena of the outer world + corresponding reactions)*.

The inhibitory process must be connected with the presence of the stimulus, but the acid reflex must be excited by **the trace** of this stimulus. (WHG 1.159)

This sentence appears in the part of the chapter that is about trace stimuli. It is explained earlier that every positive stimulus develops a trace stimulus, so even though in the immediately preceding context there is no mention of *trace* as such, as long as an on-going stimulus is mentioned, the Pavlovian frame implies that there is only one trace it produces. The choice of *the* assumes this frame. PSE, however, evidently does not accept the imposition of this frame and chooses *a*, implying a theory in which there are potentially multiple traces after a stimulus.

The next example involves a frame generally accepted in physiology:

(16) Не подлежит сомнению, что воспринимающие процессы животного гораздо точнее и обширнее, чем у человека, у которого высшие нервные деятельности, относящиеся до переработки **воспринимаемого материала**, подавляют низшие нервные процессы, участвующие при простом восприятии **внешних раздражителей**.

There is no doubt that animals' perceptual processes are far more precise and extensive than humans'; in people, their higher nervous activities directed at processing **incoming data** overpower the lower nervous processes that are engaged in the simple perception of **external stimuli**. (PSE)

Without doubt the receptor processes in the animal are finer, more exact, and more extensive than they are in man; for his higher activity, having to do with elaboration of **the incoming nervous material**, suppresses the lower nervous processes, which are concerned with the simple reception of **the external stimuli**. (WHG 1.139)

It is part of the physiologist's frame that there is always some data that is coming into the nervous system and that extrinsic stimuli regularly provide such data. So *incoming data* and its de facto paraphrase *external stimuli*, though non-anaphoric, are both implied by the frame Pavlov assumes, and they constitute a reasonable imposition for any fellow-physiologist. This justifies *the*, as was in fact WHG's choice. Moreover, with the stimulation entering the nervous system as a whole (*incoming data* and

external stimuli) being presupposed, what is being compared in this clause is the higher part of the system (which processes the entering stimuli) and its lower part (which merely perceives them). In contrast, PSE's choice of the indefinite plural \emptyset turns this clause into a simple statement about the dominance of one system over the other without contrasting the two systems vis à vis the presupposed incoming stimulation. The phrase *directed at processing incoming data* is thus reduced to a mere description of the higher nervous system, just as the phrase *that are engaged in the simple perception of external stimuli* merely modifies the lower nervous processes. With indefinite plural zero articles, the thrust of the sentence is thus altered. Such zero articles would be fine if the given clause was found in a paragraph-initial sentence or was otherwise beginning a new topic, in which *incoming data / external stimuli* are not de facto paraphrasable members of the frame. PSE, thus, prefers a non-impositional status of the frame.

d. Knowledge of the subject matter

The cases of imposed frames discussed so far can be viewed as part of the knowledge of the subject matter. Much of the disagreement about translation decisions regarding article choice in our texts ultimately resemble an imaginary conversation about the choice of *the driver* between people from two planets, one with self-driving cars and the other without them. Even the refusal by PSE to accept the imposition of distant antecedents in (11) and (12) can arguably be ascribed to the absence of the knowledge of physiology. There are some article choice decisions, however, that more unambiguously rely on some technical knowledge that is not necessarily part of the Pavlovian or even physiological frames. Some such examples are presented here in (17) and (18):

(17) Не представляет особенного труда из каждой данной интенсивности одного и того же звука сделать отдельный условный раздражитель, причем так, например, что **малая интенсивность** данного тона составляет определенный условный раздражитель, а большая остается без малейшего действия. (1.141)

It's not especially difficult to make separate conditional stimuli from different intensity levels of one and the same tone. In such a case, for example, **the low intensity** of a

given tone may be made into a certain conditional stimulus, while its high intensity will remain with no effect at all. (PSE)

It is not difficult to make from one and the same pitch many conditioned stimuli; for example, if a **small intensity** of a certain tone is made a conditional stimulus, a greater intensity of the same pitch is without the least effect. (WHG 1.140)

PSE's take here is that sounds can have either low or high intensity. WHG evidently views the intensity as a continuum with a range of small and a range of greater intensities. Indeed, what Pavlov has in mind by **малая интенсивность** is any intensity in the lower range. PSE likely lacks this understanding of acoustics.

The next example involves brain anatomy.

(18) У животного, лишённого совершенно **больших полушарий**, у нас, как и у других авторов, никакие условные рефлексы не могли быть образованы. (1.273)

In an animal completely lacking **cerebral hemispheres** we, just as other researchers, were not able to form any conditional reflexes. (PSE)

In an animal deprived entirely of **the hemispheres**, both with us and workers, no conditional reflexes have ever been formed. (WHG 1.236)

The cerebral hemispheres are one organ, though composed of two symmetrical halves. As such, article-wise it has the same status as *the brain*, *the heart*, or *the lungs*. What the animal in question lacks is the entire organ, both halves of the brain. PSE evidently treats *cerebral hemispheres* in the same way as the plural organs like *fingers* are treated.²¹

The cases examined in this section may seem relatively trivial, but they are worth examining, since such lack of understanding on the part of the translator is not uncommon. It is rather significant that an ostensibly simple choice between the articles ultimately leads to the question of extralinguistic knowledge. Moreover, as far as imposition of frames goes, the difference between imposing Pavlovian frames or

²¹ The number of body parts per normal body has been shown to play a role in the choice between possessives and the indefinite article, e.g. *I broke a /?my finger* but *I broke ?a /my leg*. See: Jori Lindley, "‘I broke a finger’: A salience-based cognitive model for selecting *a* or *my* with inalienable possessions," *Intercultural Pragmatics* 12, no. 2 (2015), pp.219-247.

general physiological frames, as well as further, anatomical frames, or even acoustic frames is not necessarily that big. If viewed that way, examples like (17) or (18) may also be cases of frame imposition.

e. The role of the sentential stress

The subtle factors considered in this final section are of a different nature. They require sensitivity to the ways Russian intonation works. The one intonational factor relevant for our discussion here is sentential stress, and like all intonational distinctions this stress is not explicitly notated in printed texts. A detailed discussion of Russian sentential stress can be found elsewhere²², so here I will simply mark the word that carries sentential stress with all caps. Examples (19) and (20) include my own translation decision, in addition to those made in published translations by SB and WHG. First, consider sentence (19) where the English equivalent may – off hand – have *a* or *the*:

(19) Возникает **ТЕНДЕНЦИЯ** под влиянием внешнего или внутреннего раздражения. (2.206)

The tendency arises under the influence of external or internal stimulation [...] (SB 528)

The tendency arises as the result of an external or internal stimulus. (WHG 2.108)

A proclivity arises, coming from the influence of an external or internal stimulus. (OTY)

The sentence-initial articles in question in both SB and WHG are the anaphoric *the*, while OTY chose the non-anaphoric *a*. In the original, the corresponding word (in

²² Yokoyama, *Discourse and Word Order*; Olga T. Yokoyama, “Narrative intonation in Zoščenko,” in O.T. Yokoyama, ed., *Harvard Studies in Slavic Linguistics*, vol. 2 (Cambridge, MA: Harvard University Slavic Colloquium, 1993), pp.214-242. Also in E. Semeka-Pankratov, ed., *Studies in Poetics: Commemorative Volume for Krystyna Pomorska (1928-1986)* (Columbus, OH: Slavica, 1995), pp.559-588; Йокояма О. Интонация как средство характеристики коммуникативного модуса повествования в зошченковском тексте // Русский язык в научном освещении. 2003. № 6. С.127-143; Olga T. Yokoyama, “Sentential Stress in written texts: evidence from literary and dialectal Russian,” *Phonological Studies*, 16 (2013), pp.109-115.

caps) carries the sentential stress. Now let us consider the extended context this sentence occurs in:

(20) [...] слабость коры [... 1.5 lines] непременно образом обуславливает и постоянное, сплошное состояние истеричных. Это – эмотивность.

Хотя жизнь животных и нас направляется основными тенденциями организма: пищевой, половой, агрессивной, исследовательской и т.д. (функции ближайшей подкорки), [... 6 lines]. Таким образом есть два способа действия. [... 8 lines] У истериков большей частью преобладает это второе действие, и по понятному нервному механизму. Возникает **ТЕНДЕНЦИЯ** под влиянием внешнего или внутреннего раздражения. Ей соответствует деятельность известного пункта или района больших полушарий. Этот пункт под влиянием эмоции [... 1 line] чрезвычайно заряжается. [... 5.5 lines] К этому присоединяется и другой механизм. [... 1 line] и это быстро ведет раздражение ее к пределу [... 2 lines] Таким образом истеричный субъект живет в большей или меньшей степени не рассудочной, а эмоциональной жизнью [...]. (2.206-207)

[...] weakness of the cortex [...] obligatorily causes the permanent, blanket, special condition typical of hysterics. I have in mind their emotivity.

Although animals' and our lives are guided by the basic proclivities of the organism, such as towards food, sex, aggression, orientation, etc. (functions of the adjacent subcortex), [...6 lines]. This means that there are two ways to act. [...8 lines] In hysterics, it is this second type of action that largely predominates, and its nervous mechanism is clear: **A proclivity** arises, coming from the influence of an external or internal stimulus. In response to this proclivity there is an activity of a certain site or region in the cerebral hemispheres. Affected by emotion, [...], this area becomes extremely highly charged. [...] And another mechanism joins this, too. [...] and this quickly leads its stimulation to the maximum limit of its working capacity [...] In this way, the hysterical subject more or less lives not a rational but an emotional life [...]

The context in (20) is provided here only in OTY's version of the translation, due to space considerations and because one version is sufficient to grasp the general flow of Pavlov's exposition. The passage explains Pavlov's reasoning behind his claim

that the chronic emotivity in hysterics results from their weak brain cortex. This claim is made at the end of the preceding paragraph that appears in the beginning of (20). The next paragraph provides the substantiation of this claim. Pavlov begins with the general assertion that animals' lives are motivated by their basic drives (proclivities) – for food, sex, etc. These base subcortical functions are moderated and coordinated by the cortex. Thus two options for acting exist: rational acts that begin from engaging the cortex, and emotive acts that bypass it. It is the latter pattern that is dominant in hysterics, says Pavlov, and he then proceeds to describe the nervous mechanism at work in hysterical subjects. At this point (and this is where sentence (19) appears), Pavlov returns to proclivities, the starting point of all animals' action, and repeats the description of the process, though this time in technical physiological terms. Because he repeats the story anew, beginning with the birth of a drive, in this new exposition the Russian *tendencija* carries sentential stress, and the corresponding English *proclivity* is non-anaphoric, i.e. *a proclivity*. The new explanation, provided as it is on a different level of physiological sophistication, creates a situation parallel to that in the second paragraph of (2), where the red balloon is the same referent as in the first paragraph, but the article reverts to *a* because the perspective is fresh. After going through the technical description step-by-step, Pavlov concludes the retelling of the process with a QED-type phrase.

Treating *proclivity/tendency* as anaphoric, as in the BS and WHG versions, creates a disorienting effect similar to that produced if in (2) Sofie saw “*the red balloon* floating above them”. I suggest that the failure to catch the sentential stress in (19) and the resulting *the* article lead to the dispreferred versions of the translation. The structure of the author's expository thrust is missed in such versions.

7. Conclusions

The first fact of note is the numerous variations in the choice of English articles between at least two native speakers of American English, one a Pavlovian physiologist and the other a professional science editor. It is quite striking for any non-native speaker who comes from a language with no articles, intends to master the English article system, and supposes there is only one “correct” answer in each given case. It turns out that English articles share with other discourse-controlled language phenomena their shifting character, their dependence on speaker perspective, and on the acceptability of

speaker imposition, i.e., his/her unilateral ego-centric attention to certain cognitive entities at the expense of objectivity. The subset of cases discussed in this paper was selected on an empirical basis, the actual translation problems encountered by this author. Only those cases for which there appeared to be groups of explicable choice variations were considered. Generalizations seem possible at least with respect to the factors considered here. A complete description of English article usage that would enable a non-native learner of ESL to produce choices fully acceptable to most native speakers is still out of sight – and I say “most” because the examples here show that native speakers do disagree. It is encouraging that at least the theoretical concepts that have been proposed for other discourse-controlled phenomena were shown to provide some explanatory help for this endlessly challenging problem.

Most generally, of course, the exercise presented here is not about translation. It goes to the heart of many fundamental questions about language, meaning, bilingualism, and speaker-addressee interaction.