Agent prominence and movement in Russian third person plural impersonals ("indefinite-personal sentences")

Daniel Bunčić

The present paper reports the results of an acceptability judgement test designed to test two hypotheses: first, that the Russian 3pl impersonal construction is affected by agent prominence, i.e. verbs implying a more prominent agent are more acceptable than verbs implying an agent with fewer agentivity features; second, that movement as an agentivity feature should be conceptualized as a gradual category, thus making a fast-moving referent a more prominent agent than one moving slowly. The former hypothesis could be verified, the latter falsified.

Keywords: agentivity, linguistic prominence, verbs of motion, volition, sentience

Bunčić, Daniel, Universität zu Köln; daniel.buncic@uni-koeln.de

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1. Introduction

The Russian third person plural impersonal construction is formed by a verb in the third person plural (3pl) without any overt subject:

(1) *Zdes' prodajut bilety na koncerty.*
here sell.**3PL** tickets.ACC on concerts.ACC
'Concert tickets are sold[1] here.' (Švedova 1980: 637, §1525)

It has been shown that constructions with a similar semantics as the Russian 3pl impersonal are ungrammatical with non-agentive verbs and are the better the more agentive the verb is. Thus, Primus (2011) argues that impersonal passives in German, Dutch, Icelandic, and other languages are constrained by agentivity features; Bunčić (2018) shows that the Polish and Serbo-Croatian[2] reflexive impersonal and the Polish *-no/-to* construction have a higher frequency in corpora in

[1] There is no invariant English translation for the Russian 3pl impersonal. Therefore, for each example I try to use an idiomatic translation appropriate in the given context, which can be 'one', 'they', 'people', 'you', 'someone' or, as in this case, the passive.

[2] Since the corpus used in Bunčić (2018) was hrWaC, the findings are mainly about the

relation to the overall frequency of the respective verb if the verbs are more agentive; Kretzschmar et al. (2019) and Bunčić (2019) show that the German personal passive and the Polish *-no/-to* construction, respectively, are rated better in an acceptability judgement test if the verb is more agentive.

In contrast to these constructions, all of which have some connection with a reflexive or passive construction (including the Polish *-no/-to* construction, which is etymologically derived from the passive participle), the Russian 3pl impersonal is a simple active verb form, which differs from the personal 3pl only by the missing overt subject. Consequently, the question arises whether this construction is nonetheless affected by agentivity. This paper will report the results of an acceptability judgement test designed to answer this question.

After some general information about the construction to be examined (section 2), a model to represent the effect of agentivity on impersonal constructions and passives will be presented together with the empirical test designed to verify the hypothesis arising from this model (section 3). A special problem concerning movement as an agentivity feature will be examined separately (section 4).

2. The Russian 3pl impersonal

In traditional Russian grammatical terminology, 3pl impersonals are referred to as *neopredelënno-ličnye predloženija* 'indefinite-personal sentences' (Vinogradov 1954: 5–12; Švedova 1980: 637, §1525; Nikitina 2011; Padučeva 2012). However, on the one hand, in the sense of Siewierska (2008: 116), this construction is impersonal in that it clearly lacks "a canonical subject" that is "realized by a verbal argument which is fully referential and manifests the morphosyntactic properties of subjects in a language". It is even impersonal in two ways, the subject being neither "fully referential" nor overt; so calling it *personal* is misleading. On the other hand, the implicit subject in this construction is not necessarily *indefinite* either. Berger (1991: 75) has shown that it can be either indefinite or "definite inferred" ("inferentiell definit"). Malamud (2013: 12) shows that the Russian 3pl impersonals do not behave like indefinites in that they do not show the Quantificational Variability Effect (QVE)[3] and therefore "are definite". Plungjan (2011: 223) in his Russian text

Croatian standard variety. The Serbo-Croatian reflexive impersonal shows dialectal differences with respect to the question whether non-human accusative objects can be combined with it (also within the Croatian dialectal area, see Tilburg 1986, to which I was thankfully alerted by an anonymous reviewer). For the appropriateness of the term *Serbo-Croatian* despite such dialectal differences, see Bunčić (2008).

[3] The QVE is the effect that a temporal adverb can quantify over a subject NP, e.g. in *A Penn student is usually smart*, which, apart from the literal reading 'A Penn student is sometimes smart and sometimes not', can have the reading 'Most Penn students are smart'. This QVE is available for indefinite and generic NPs but not for definite ones (Malamud 2013: 10). Malamud (2013: 12) claims that the QVE is also not available for Russian 3pl

follows international linguistic terminology in calling these constructions "impersonal" ("bezličnymi, ili *impersonal'nymi*", original emphasis; also *impersonaly* as a noun). This is also the term used in this article.

This construction, however, is not always marked for third person, since the Russian preterite (as in (2)) is not marked for person (but for number and, in the singular, for gender), and Russian sentences do not need a finite verb, e.g. in the case of predicative adjectives with a zero copula (as in (3)).

(2) *Pozvonili* *po* *telefonu.*
call.PST.**PL** over telephone
'Someone called on the phone.' (Nikitina 2011: (9))

(3) *Est'* *dom,* *gde* *vam* *vsegda* *rady.*
is house.NOM where you.DAT always happy.**PL**
'There is a house where people are always happy to see you.' (Padučeva 2012: 28)

Many 3pl impersonals (cf. Siewierska & Papastathi 2011 for an overview) are formally identical to 3pl forms with anaphoric reference, e.g. the English *they say* construction, which always includes the pronoun, or the Polish 3pl impersonal, which does not have a pronoun, but neither does a normal sentence with a subject with anaphoric reference because Polish is a pro-drop language (in which the pronoun can, however, be overt under certain circumstances, cf. McShane 2009). In contrast to this, the Russian 3pl impersonal is clearly distinguished from the regular third person by the obligatory lack of an overt subject:[4]

impersonals as in *Na ėtom fakul'tete obyčno gordjatsja dekanom* 'At this faculty, they're usually proud of the dean', which therefore cannot be interpreted as 'Most people at this faculty are proud of the dean'. If this is true, the 3pl impersonal is in this respect aligned with definites and set apart from indefinites and generics.

[4] The unavailability of the arbitrary reading if the overt pronoun *oni* is used in sentences like (4) was called into question by Lindseth (1998: 50), who stated that "some Russian native speakers nevertheless confirmed that the examples […] can have an arbitrary interpretation". However, Malamud (2013: 4) replies on the basis of corpus research that "examples that may be overt 3rd person plural impersonals […] are extremely rare". We can therefore assume that the arbitrary reading with an overt 3pl pronoun is achieved only by coercion: If a native speaker encounters an antecedentless 3pl pronoun (e.g. in an artificially constructed linguistic test item), the arbitrary interpretation is the only interpretation available that can 'save' the sentence from being completely nonsensical. Furthermore, sentences which e.g. begin with *vo Francii* 'in France' but continue as if they had begun with *Francuzy* 'the French' and thus include an anaphoric overt pronoun without antecedent are to be expected as a rare performance phenomenon. Thus, the lack of an overt pronoun can be assumed to be an obligatory feature of the Russian 3pl impersonal despite the native speakers' judgements cited by Lindseth and the possible corpus examples mentioned by Malamud.

(4) *Vo Francii (#oni) edjat ulitok.*
in France (#they) eat.3PL snails
'In France, they eat snails.' (Cabredo Hofherr 2006: 234)

In contrast to this, sentences with anaphoric reference do not usually have pro-drop in Russian:

(5) *Pervaja gruppa — kèptivnye kompanii.* ***Oni*** *rabotajut s odnim klientom* […].
first group captive companies **they** work.3PL with one client
'The first group are the captive [insurance] companies. They work with [only] a single client.' (NKRJa: Aleksej Janin, Vzjať riski pod krylo, *Ėkspert* 2004.12.13)

However, in certain cases pro-drop is possible, so that Russian can be classified as "a partial pro-drop language" (Bizzarri 2015). More specifically, the "baseline option" for Russian subject pronouns is to be overt, but there are clearly definable circumstances, always arising from the immediately preceding sentences/clauses, under which the subject pronoun can be elided (McShane 2009), e.g. in subordinate clauses as in (6) or in "a series of three or more actions with the same subject" (ibid. 212) as in (7):

(6) *Lena skazala, čto ∅/ona delaet uroki.*
Lena said that ∅/she does homework
'Lena said she was doing her homework.' (Bizzarri 2015: 340)

(7) *Ja, neizvestno začem, položil rjadom s soboju knižku žurnala; s cel'ju čitať, nado polagať. No ∅ ničego ne pročel. ∅ Xotel postaviť ešče raz termometr, no ∅ ne postavil.*
'I, for some reason, put down beside me an issue of a journal – to read it, apparently. But [I] didn't read anything. [I] wanted to take my temperature again but [I] didn't.' (McShane 2009: 121)

Consequently, the 3pl impersonal, while theoretically distinct, is partially homonymous with regular personal sentences. Note, however, that it is still a distinct construction, because with anaphoric reference the use of the personal pronoun is always possible (and often obligatory), whereas in the 3pl impersonal the pronoun has to be dropped, as shown in (4).

According to what has been written about the Russian 3pl impersonal so far, there hardly seem to be any constraints for the verbs that can be used in this construction. The implicit subject is obligatorily [+ human], which implies that verbs that cannot have a human subject are excluded.[5] According to Padučeva

[5] Mel'čuk (1995: 200) quotes the "normal sentences" *Nado že, vsë sklevali!* 'I can't believe it, everything got picked up!' (with a 3pl zero subject referring to birds) and *Bednen'kij, kak tebja pokusali!* 'Poor thing, you got all bitten up!' (referring to insects) as "complications", pointing out that a reference to cattle in a sentence like **U nas pasutsja na bol'šom lugu* '(intended:) We have [them = cows] grazing in the big pasture' is nonetheless impossible. He concludes that the sentences with the birds and insects probably "manifest ellipsis of

(2012: 29), verbs that refer to typical animal activities, when used in the 3pl impersonal, will be interpreted in such a way that humans imitate these activities:

(8) *Za* *oknom* *mjaukali.*
behind window meow.3PL
'Outside the window, people meowed.' (ibid., quoting Bulygina & Šmelev 1990: 346)

However, the coercion in (9) pointed out by Kibort (2004: 292) for the Polish reflexive impersonal, in which the implicit subject is interpreted as actually being [– human], does not seem to be possible in the Russian 3pl impersonal, see (10).

(9) *Gdy* *się* *jest* *bocianem,* *gniazdo* *buduje* *się* *wysoko.*
if REFL is stork.INSTR nest.ACC build.3SG REFL high
'If one is a stork, one builds the nest high up.' (Kibort 2004: 292)

(10) **Buduči* *aistom,* *gnezdo* *strojat* *vysoko.*
be.PTCP.PRS.ACT stork.INSTR nest.ACC build.3PL high

3. Agent prominence

3.1 Theory

As pointed out in the introduction, my hypothesis is that it is not true that the Russian 3pl impersonal can be used with any verb as long as the implicit subject is human. Instead, I hypothesize that the 3pl impersonal is completely acceptable only with fully agentive verbs. The less agentive the verb is, the less acceptable the 3pl should be, and with non-agentive verbs it should be unacceptable. This hypothesis is based on the fact that such an agentivity cline has been demonstrated to exist for the German impersonal passive (Primus 2011), the Serbo-Croatian reflexive impersonal (Bunčić 2018), and the Polish *-no/-to* construction (Bunčić 2019, Prenner 2019). All of these constructions have in common with the Russian 3pl impersonal that they belong to a certain type of impersonal constructions: they are "R-impersonals" (Malchukov & Ogawa 2011), i.e. impersonals with reduced referentiality, "human impersonal pronouns" or "HIPs" (although in part without an overt pronoun, Gast & van der Auwera 2013: 121), or "arbs", i.e. "constructions with arbitrary interpretations" (Malamud 2013: 1). They all demote an agent without promoting a patient, and it seems plausible that this operation only works well with a 'good' agent.

However, what is a 'good' agent, and how exactly does the 'quality' of the agent affect its demotion? Dowty (1991: 572) characterizes the agent as a prototypical category ("Proto-Agent"), which can be described by four "contributing properties":

the grammatical subject, rather than a zero lexeme as a grammatical subject" (ibid.), i.e. in our terminology they would not be 3pl impersonals but merely homonymous with 3pl impersonals due to pro-drop.

"a. volitional involvement in the event or state
b. sent[i]ence (and/or perception)
c. causing an event or change of state in another participant
d. movement (relative to the position of another participant)"

The more of these properties a referent has, the better an agent it is. Dowty uses this prototypical model to explain subject choice. Similarly, it might be that a verb entailing a non-prototypical agent is generally less acceptable than a verb entailing a prototypical agent.

Another model to account for effects of the semantic role hierarchy was proposed by Himmelmann & Primus (2015) – the model of linguistic prominence. This model seeks to describe prominence as a linguistic phenomenon that is relevant in many areas of language, including prosody, morphosyntax and semantics, and discourse pragmatics. It is assumed that three properties distinguish prominence from other linguistic phenomena: Prominence operations single out units from a number of equals (which sets prominence apart from, for example, head-dependent operations); the prominence status changes while discourse unfolds (in contrast to prototypicality, for instance); and "prominent units function as structural attractors in their domain" (ibid. 38), which means that prominence has a relevant visible effect. According to this model, "Proto-Agents […] are structural anchors" (ibid. 50) that can license a prominence-dependent operation like passivization or impersonalization. The specialty of this model is that it includes "context-dependent shift" (ibid. 48), so that it can account for different effects of prominence in different contexts, including the contexts that account for the choice of a personal or impersonal construction.

3.2 Acceptability judgement test

In order to test whether the Russian 3pl impersonal is rated better with more agentive verbs than with less agentive ones, verbs were chosen in four groups with different numbers of Dowty's (1991: 572) agentivity features, in a similar way as in the test design described in Bunčić (2019: 66–68):

1. **3 features:** [+ volition] [+ sentience] [– causation] [+ movement]
   idti **'walk'**, *maršírovať* 'march', *guljať* 'stroll'
2. **2 features:** [– volition] [+ sentience] [– causation] [+ movement]
   čixať **'sneeze'**, *drožať* 'shiver', *kašljať* 'cough'
3. **1 feature:** [– volition] [+ sentience] [– causation] [– movement]
   somnevaťsja **'doubt'**, *stradať* 'suffer', *zamerzať* 'freeze'
4. **0 features:** [– volition] [– sentience] [– causation] [– movement]
   blesteť **'glisten'**, *vonjať* 'stink', *sijať* 'shine'

Of course, this is only a small selection of the theoretically possible 2 × 2 × 2 × 2 = 16 combinations of these four features (e.g. the combination [+ volition] [+ sentience] [– causation] [– movement] is represented by verbs like *ždat'* 'wait' or *dumat'* 'think'). In order to keep the transitivity of the verbs constant, only syntactically intransitive verbs were chosen, which also meant that we did not select any causation verbs.

The verbs chosen – which of course have different frequencies but show no significant frequency differences between the verb groups (see Appendix) – were then used to construct test items, which consisted of an introductory sentence presenting some context and ensuring that the critical form is not at the edge of the item, followed by the critical sentence, which started with the verb in the impersonal 3pl and always included a subordinate clause. All these items were complemented by a version with an overt personal subject instead of the impersonal construction, so that the effect of agentivity can be analysed on both the 3pl impersonal and a regular, personal construction. See (11)–(13) for examples.

(11) *Odnim iz razvlečenij na ėkskursii dlja požilyx ljudej bylo poseščenie bazara. (Šli / Pensionery šli) na rynok kupit' suveniry, čtoby privezti ix vnukam.*
'One of the attractions on the excursion for senior citizens was the visit of a bazar. (One went / The retirees went) to the market to buy souvenirs to take home to their grandchildren.'

(12) *V voennom gospitale byla ėpidemija. (Kašljali / Pacienty kašljali), a vrači ne mogli pomoč'.*
'In the military hospital there was an epidemia. (One coughed / The patients coughed), but the doctors could not help them.'

(13) *Iz-za sil'nogo solnečnogo sveta, neobxodimo bylo nanesti krem ot zagara. (Blesteli / Deti blesteli), potomu čto materi ispol'zovali sliškom mnogo krema.*
'Due to the strong sunlight, it was necessary to put on sunscreen. (One glistened / The children glistened) because the mothers had applied too much lotion.'

It was taken care that in all test items the context made it clear that the (implicit) subject was human (even with the 'glisten' verbs) and that the meaning of the verb in the given context was always roughly the same, so that e.g. *blesteť* was always used in the sense of 'to glisten', not in a metaphorical sense (as e.g. in *sostav kommisii, v kotorom blestit mnogo izvestnyx imen učenyx* 'the composition of the committee, in which shine many well-known names of scientists', NKRJa: *Vremja* № 1, 1861).

For each verb tested, three such contexts were formed, so that a total of 72 test items (4 groups × 3 verbs × 3 contexts × 2 constructions) was created. They were distributed evenly over 6 questionnaires (i.e. 12 items per questionnaire) so that every verb was used only once in each questionnaire and every questionnaire contained 6 impersonal and 6 personal test items. For each of the sentences, respondents were asked to rate the acceptability on a six-point Likert scale ranging

from "– – –" to "+ + +". All the questionnaires were supplemented with 18 fillers (9 positive control items taken from the Russian National Corpus and 9 negative control items manipulated in such a way that they contained semantic or grammatical errors) as well as 6 more test items that will be discussed in section 4.2. The 36 questions in each questionnaire were pseudo-randomized in such a way that the actual test items were always separated from each other by a filler and that the first item was also a filler.

The questionnaires were compiled on *SoSciSurvey.de*, and the hyperlink for the test was sent to colleagues in Russia, Belarus, and Ukraine with the request to distribute them among their students, colleagues, and friends. At the beginning of the test the respondents were asked about their gender, native language, level of education, age, and place of living. After that an urn-draw mechanism randomly selected one of the six questionnaires. All in all, 99 questionnaires were filled out by 63 women and 35 men living in different countries (36 in Russia) with an average age of 34 years (of which 15 were between 19 and 25 years old but only 2 between 60 and 68) and an education clearly above average (86 had a university degree or were students at a university).

In the following diagrams (figures 1–3), each column shows the arithmetic mean of at least 62 and up to 593 individual ratings (with the lowest number in the case of 'walk' in Figure 1 and the highest for the positive control items, which were the same in all six questionnaires).[6] Statistical significance was calculated by a one-way analysis of variance (ANOVA). In the diagrams, asterisks indicate the level of significance, with one asterisk for $p < 0.05$, two for $p < 0.01$, and three for $p < 0.001$.

3.3 Results

As expected, acceptability ratings for the different verb classes show a clear agentivity cline in the 3pl impersonal (see Figure 2): The 'walk' class with 3 agentivity features is significantly better ($p < 0.01$) than the 'doubt' and 'sneeze' classes, and these verbs are also significantly better ($p < 0.01$) than the 'glisten' class without any agentivity features. The 'glisten' class even turned out to be rated on the same level as the negative control items with their grammatical and semantic errors, so

[6] Although extensive pre-tests had been conducted with Russian native speakers living in Germany, it unfortunately turned out only after the main test run that 17 of the 126 test items contained errors, due to which they could not be evaluated. For example, one pair of test items contained the noun phrase **stroitel'skie raboty*, where the correct expression (*stroitel'nye raboty* 'construction works') contains a different suffix, a couple of 3pl impersonal items contained an NP in the first sentence that could serve as an anchor for anaphoric reference in the second sentence, etc. Consequently, the figures for the 'walk' class are based on only 6 test items, instead of 9 items as originally planned. However, this does not seem to have had a negative effect on the statistical significance of the results.

that the 3pl impersonal with non-agentive verbs can be considered to be ungrammatical. There is also a slightly significant difference ($p \approx 0.04$) between the 'walk' class and the positive control items. This might be merely due to the fact that the positive control items were directly taken from authentic texts, whereas the items of the 'walk' class were artificially constructed, with all the problems involved in this method. However, the difference might also point to the fact that even the verbs of the 'walk' class, being syntactically intransitive and therefore not "causing an event or change of state in another participant" (Dowty 1991: 572), are not fully agentive because they lack the feature [+ causation].

However, there is no significant difference between the 'sneeze' class with sentience and movement and the 'doubt' class, which has only sentience and no movement. Numerically the 'doubt' class looks even better than the 'sneeze' class. This phenomenon has already shown up in other studies: There were no significant differences in relative frequency of the Polish and Serbo-Croatian impersonal constructions examined between these two types of verbs (Bunčić 2018: 108), and with the Polish *-no/-to* construction the 'doubt' class was even significantly more acceptable than the 'sneeze' class (Bunčić 2019: 71). Part of the solution to this puzzle might be that verbs for which sentience is part of the denotation (especially verbs of cognition like *somnevat'sja* 'doubt', which seem to require a human agent) are in some way more agentive than other verbs that merely entail [+ sentience] in the form of perception as one of their features (cf. Kretzschmar et al. 2019, where sentience verbs are examined in more detail). Another approach at explaining this finding is the assumption that the movement entailed in sneezing, shivering, and coughing cannot be compared to actual locomotion as in the 'walk' class. Movement will therefore be dealt with in more detail in section 4.

In the test items with overt personal subjects (Figure 1) we see quite a different picture. The first three verb groups do not show any significant differences, none of them being significantly worse than the positive control items. We do see a significant difference between the 'glisten' class and the other three verb classes ($p < 0.001$), but this might be a frequency effect, because these verbs are primarily used with inanimate subjects, so that their use with human subjects in our test items is a bit unusual. However, in contrast to these verbs in the 3pl impersonal

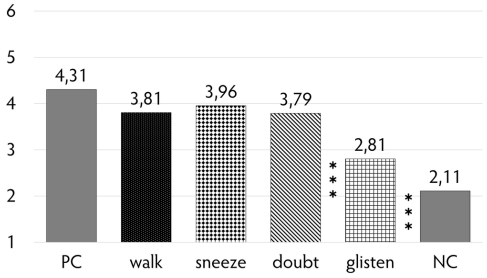

Figure 1: Overt personal subject

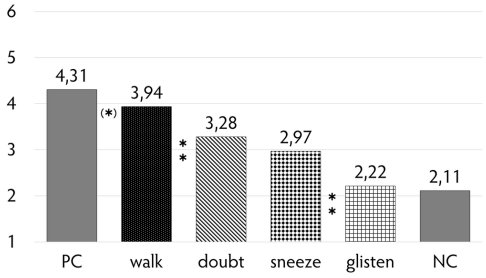

Figure 2: 3pl impersonal

construction, they are still significantly better ($p < 0.001$) than the negative control items.

This shows that the agentivity cline in the 3pl impersonal cannot be explained by prototypicality, as assumed by Dowty (1991). A more or less prototypical agent would always be more or less prototypical and should show the same results independent of the grammatical construction used. Since the cline is obviously construction-specific, the most straightforward explanation for it is the assumption of a prominence relation in the sense of Himmelmann & Primus (2015). Consequently, the Russian 3pl impersonal should be conceived of as a prominence-dependent operation that is licensed by a prominent agent.

4. Movement

4.1 Theory

Kudrnáčová (2008: 9) has shown that motion verbs differ in their "potential to express agentivity". Specifically, "path verbs" like *come* or *go* are more agentive than "manner of motion verbs" like *walk* or *fly*, which motivates her "to posit directed motion as a distinct category" (ibid. 113). The fact that this is a distinct category does not surprise a student of Russian, where many verbs of motion come as two different lexemes, one for directed and the other for non-directed motion, e.g. *idti* 'walk (directed)' vs. *xodit'* 'walk (non-directed)', *bežat'* 'run (directed)' vs. *begat'* 'run (non-directed)', *letet'* 'fly (directed)' vs. *letat'* 'fly (non-directed)', etc. The question is if the effect of directionality on agentivity can be explained by the already accepted agentivity features. It seems that volitionality, a feature mentioned only in passing by Kudrnáčová (2008: 110), might be helpful here. Assuming that the verbs of motion usually have a volitional agent (a human, an animal, or a vehicle operated by a human), non-directionality seems to somehow reduce the volitionality. While e.g. the decision to run or not to run may still be volitional, if someone runs around non-directionally, the control over when they are at which point is not necessarily given (so it is not entailed by the verb semantics). Consequently, "a participant that changes his/her location in a goal-directed way independently of another participant is a more prototypical agent than a participant that moves aimlessly" (Philipp et al. 2017: 13).

The results of an ERP study conducted by Philipp et al. (2017) point in the same direction. However, they did not use different types of verbs but always the same German verbs of motion "which are indeterminate with respect to event structure […] and agentivity" (ibid. 2, e.g. *schweben* 'hover') with varying adverbials (prepositional phrases) indicating directionality (e.g. *auf den Acker* 'to the ground') or non-directionality (e.g. *über dem Fluss* 'above the river'). In the experiment, the non-directional adverbials clashed (i.e. produced an N400 effect) with animate subjects (e.g. *der Gleitschirmflieger* 'the paraglider'), whereas directional adverbials

clashed with inanimate subjects (e.g. *das Ahornblatt* 'the maple leaf'; although this effect occurred not immediately on the adverbial but only when the presentation of the event was concluded by the verb participle, ibid. 12f.).

Consequently, the differences observed in the agentivity of different kinds of motion can be explained by volition, so that they do not require Dowty's (1991: 572) binary feature of "movement (relative to the position of another participant)" to be reanalysed. A verb either entails movement or it does not. However, Dowty (1991: 607) himself classifies *sneeze* and similar verbs as verbs that "involve *some* movement" (emphasis added), and in one instance he gives an even more specific qualification of movement:

> "in some prototypical causation events such as throwing something or handing an object to someone, the Agent, although it causes the event and makes *a small local movement*, stays behind, while the object, the 'Theme', moves away from it" (ibid. 602; emphasis added).

This raises the question whether movement really is a binary or maybe rather a gradual (scalar) category (i.e. if you can have "some movement", you might also have 'more movement' or 'a lot of movement'; if you can have "a small […] movement", you might also have 'a less small movement', 'a big movement', 'a very big movement', etc.).

The most straightforward gradual difference in movement is speed. Indeed, if the velocity of an agent increases, its momentum increases proportionally, and its kinetic energy even increases proportionally with the velocity squared. Given that movement is a feature of a prominent agent, one might suppose that greater kinetic energy makes an agent even more prominent. An empirical test of this hypothesis is described in the following subsections.

4.2 Additional test items

We are now coming back to the mentioned 6 additional test items of the test discussed in section 3.2. Apart from the 'walk' group already described there, we also created a group of verbs denoting fast movement and a group of verbs denoting slow movement. Note that all these verbs are manner-of-movement verbs for the same manner, namely movement on foot:

3 features: [+ volition] [+ sentience] [– causation] [movement, **fast**]
bežať **'run'**, *spešiť* 'hurry', *nestiś* 'race'

3 features: [+ volition] [+ sentience] [– causation] [movement, **neutral**]
idti **'walk'**, *maršírovať* 'march', *guljať* 'stroll'

3 features: [+ volition] [+ sentience] [– causation] [movement, **slow**]
šagať **'pace'**, *bresti* 'plod', *stupať* 'step'

Admittedly, the difference in speed between the neutral 'walk' group and the slow 'pace' group is rather context-dependent. However, there are only few Russian verbs of motion that make some implication about the speed, and for the verification of the hypothesis it would be sufficient to find a difference between the 'run' verbs and the 'pace' verbs.

The test items were constructed in the same way as for the other verbs described in 2.2. Where verbs of motion form a directionality pair in Russian, the verb selected for the test was always the directed member of the opposition (i.e. *bežatʹ* rather than *begatʹ* 'run', *nestisʹ* rather than *nositʹsja* 'race', *idti* rather than *xoditʹ* 'walk', and *bresti* rather than *broditʹ* 'plod'; the other verbs chosen are neutral with respect to directionality). Furthermore, all the items with verbs of motion included an adverbial that indicated a goal/direction rather than a location. As with the other verbs, there were no significant frequency differences between the groups (see Appendix).

4.3 Results for motion verbs

The results of these three verb groups are shown in Figure 3. It is obvious that there is no significant difference between the 'run' group of verbs and the 'pace' group. The difference between 'walk' and 'pace' is slightly significant ($p \approx 0.03$),

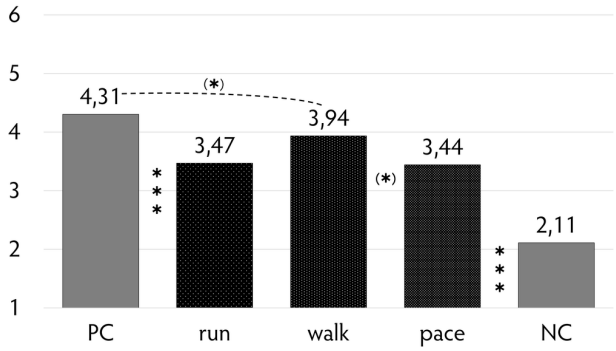

Figure 3: 3pl impersonal with motion verbs

but this is probably a frequency effect, since the verbs of the pace group are much less frequent and semantically restricted than the verbs of the other two groups and especially the verb *idti* 'walk' (see Appendix). The difference between 'walk' and 'run', although the average rating for 'run' is very similar to the one for 'pace', is statistically not significant.

These results represent a clear falsification of the hypothesis. Not only is 'run' not significantly better than 'walk' and 'pace'; visually, 'walk' is even better than 'run'. Although in the real world movement is clearly gradual, in language, at least with respect to agent prominence, it seems to be conceptualized as a binary category. Consequently, "a small local movement" (Dowty 1991: 602) is treated as no

movement at all, and quick movement does not make an agent more prominent (or prototypical) than slow movement.

5. Conclusion

In the Russian 3rd plural we could find an agentivity cline of the form 'walk' = 'run' = 'pace' > 'doubt' = 'sneeze' > 'glisten'. In other words, the construction is more acceptable with verbs that imply volition than with verbs that do not, and verbs implying sentience are also better than verbs not implying any sentience. No effects could be found for the "small local movement" involved in the non-volitional verbs and for the speed of movement in the volitional verbs. In the same contexts, the personal construction with an overt subject did not show this agentivity cline. With 'walk' = 'run' = 'pace' = 'doubt' = 'sneeze' > 'glisten', there were no significant differences except for one group. The fact that the agentivity clines for the two constructions are not the same cannot be explained by mere agent prototypicality. Instead, a prominence model has to be assumed, in which agent prominence licenses impersonalization as a prominence-dependent operation.

Appendix: Verb frequencies

Frequency plays an important role in language processing (cf. e.g. MacDonald et al. 1994, Crocker & Brants 2000). Therefore, it has to be ensured that the results of the tests are not merely an artefact of the raw frequencies of the verbs used in the test. The following list shows the absolute frequencies for each verb lexeme in the Russian National Corpus (NKRJa, main corpus, 288,727,494 words):

'run' group:	*bežat'* 'run' 55,969; *spešit'* 'hurry' 21,502; *nestis'* 'race' 9,212	∅ 28,894
'walk' group:	*idti* 'walk' 303,295; *guljat'* 'stroll' 19,685; *marširovat'* 'march' 1,050	∅ 108,010
'pace' group:	*stupat'* 'step' 10,391; *šagat'* 'pace' 8,517; *bresti* 'plod' 4,247	∅ 7,718
'sneeze' group:	*drožat'* 'shiver' 21,794; *kašljat'* 'cough' 2,666; *čixat'* 'sneeze' 950	∅ 8,470
'doubt' group:	*stradat'* 'suffer' 20,346; *somnevat'sja* 'doubt' 15,231; *zamerzat'* 'freeze' 1,818	∅ 12,465
'glisten' group:	*blesteť* 'glisten' 26,951; *sijat'* 'shine' 12,010; *vonjat'* 'stink' 1,390	∅ 13,450

From the fact that the frequencies *within* the groups differ by factors of up to 289 one can easily see that the frequency differences *between* the groups are not statistically significant. This is confirmed by a one-way analysis of variance (ANOVA: overall $p \approx 0.50$; even for 'walk' vs. 'pace', $p \approx 0.36$).

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