

The Polish passive and impersonal in Lexical Mapping Theory*

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accounts usually do not take into consideration the existence in Polish, alongside the *-no/-to* construction, of ‘true’ impersonal passives of intransitives, such as the one in (2), which contain SG NEUT participles.

The misclassification of the *-no/-to* construction as passive leads to theoretical solutions which are forced to compromise some correct descriptive generalizations for which there is extensive evidence. Since the *-no/-to* construction does not feature the advancement of the object to subject position, ‘passive plus accusative’ constructions have to be allowed into the theory, sacrificing the putatively universal generalization that a passive construction cannot retain a structural accusative object. Also, since the *-no/-to* construction applies unproblematically to typical unaccusative predicates, the theory is forced to allow ‘passives of unaccusatives’ thus compromising the generalization that passives cannot be formed of ‘initially unaccusative’ verbs (Perlmutter 1978). Worse yet, analysing the *-no/-to* construction as passive renders theories unable to offer a principled account of the variation within the construction, since there is no principled way to account for the fact that some languages allow ‘passives’ of unaccusatives alongside passives of unergatives while others strictly prohibit them. It is not even clear that formal accounts have any straightforward way of describing this typological difference. Whether or not to analyse the *-no/-to* construction as distinct from the passive is, therefore, not an argument between two accounts with differing constraints. It is, rather, an argument between an account which provides a coherent notion of the passive, and an account which offers an extended notion of the passive and no principled description of the variation within the construction.

To sum up, the theoretical challenge posed by the *-no/-to* construction is not just to account for its properties mentioned above, but also to explicate its relation to the passive, and to reappraise the analysis of the passive, including the impersonal passive of intransitive, in such a way as to preserve previous, robust generalizations.

It can be argued that the problems posed by the *-no/-to* construction derive from a more general challenge posed by impersonal constructions. No current theory offers an account of impersonals and, as suggested by Blevins (2001:1), this might be due to the fact that most formal frameworks explicitly exclude the possibility of subjectless constructions. This is achieved through subject-legislating constraints such as the ‘Extended Projection Principle’ of Government and Binding or Minimalism, the ‘Final 1 Law’ of Relational Grammar, or the ‘Subject Condition’ of Lexical-Functional Grammar. The challenge is, first of all, to provide a mechanism which would allow a class of constructions which do not, and cannot, have a subject constituent. Moreover, the mechanism should distinguish those constructions which are impersonal and at the same time syntactically subjectless (such as impersonal passives of intransitives) from those which are impersonal but do have a syntactically active covert subject (such as the *-no/-to* impersonal). It is worth pointing out here that, in spite of often serving a similar communicative purpose to personal and impersonal passives, the latter have almost always been considered non-passive in traditional descriptive or specialist literature (c.f., recently, Tommola 1998 on the ‘suppressive ambipersonal’ in Finno-Ugric).

In Polish descriptive linguistic tradition, for example, the *-no/-to* impersonal has rather unanimously been regarded as ‘active indefinite’ (e.g. Wierzbicka 1966, Siewierska 1988). In this paper, I will first look at the distribution of the *-no/-to* verb form and the morphosyntactic properties of the construction and I will present the evidence demonstrating that the Polish *-no/-to* impersonal is indeed not passive. Most importantly, unlike the real impersonal passive, the *-no/-to* construction does not lack the syntactic subject. I will then discuss the model of argument structure underlying the analysis which I propose. Finally, I will offer an analysis of both the passive and the impersonal. Following broadly the current lexicalist analyses, I will argue that the passive is an instance of an alternative (non-default) mapping of grammatical functions of the predicate which does not alter its meaning (i.e. lexical semantics). The *-no/-to* impersonal, on the other hand, results from an operation which ‘blocks’, or ‘holds up’ the subject position without affecting either the semantics of the predicate or the assignment of the grammatical functions. Passivization can, therefore, be seen as a function-changing process which demotes an ‘initial’ subject to an optional oblique, while *-no/-to* impersonalization is a function-preserving process that suppresses the realization of a ‘final’ subject in a similar way to the one assumed in analyses of analogous constructions in Uralic (cf. Blevins 2001:2).

When the non-overt subject of an embedded impersonal clause is raised to the subject position in the main clause, the raising verb (*zdawać się* ‘seem’) turns up in the impersonal, as in:

(10)
Zdawano się tego nie dostrzegać.
seemed.IMPERS REFL this.GEN NEG notice.INF
‘[Those people] seemed not to notice this.’

And, finally, the *-no/-to* construction allows the use of reflexive and reflexive possessive pronouns in cases where they require to be bound by the subject, as in:

(11)
Oglądano się/siebie w lustrze.
looked-at.IMPERS self[REFL].ACC in mirror
‘One looked at oneself in the mirror./They looked at themselves in the mirror.’

(12)
Oglądano swoje zbiory.
looked-at.IMPERS own[REFL].ACC collections.NONVIR.ACC
‘One looked at one’s collection./They looked at their collection.’

Since the *-no/-to* impersonal may overlap with the passive in its communicative effect, it may be considered ‘passive in meaning or use’, and for this reason it has often been classified as passive in functional accounts (cf. Blevins 2001:5). It is, however, clear, that it is not ‘passive in form’. Formally, it “pattern[s] with synthetic verb forms that incorporate a subject argument, except that the suppressed subject of an impersonal receives an indefinite interpretation” (ibid.).

3. Modelling the mapping of arguments to syntactic functions

The core ideas expressed in the two previous sections can be summarized in the following pre-theoretical hypotheses about the passive and the *-no/-to* impersonal. Both constructions are, morphologically, derivational. They result from operations on lexical argument structures of predicates which affect the subject. The passive is an instance of an alternative (non-default) mapping of grammatical functions of the predicate, as a result of which the ‘initial’ subject is demoted to an optional oblique. It is, therefore, a function-changing operation. The *-no/-to* impersonal suppresses the realization of the ‘final’ subject. The ‘blocking’ of the subject position prevents the object from being ‘promoted’. *-No/-to* impersonalization is, therefore, a function-preserving operation, i.e. it does not alter the default mapping of the grammatical functions. Neither passivization nor *-no/-to* impersonalization seems to affect the lexical semantics of the predicate: both operations are, therefore, meaning-preserving (cf. Sadler & Spencer 1998, Ackerman & Moore 2001).

3.1. LFG’s model of argument structure

In order to capture the above generalizations, we need a model of argument structure which contains minimally the following components: (a) a semantic tier representing the hierarchically organized participants in the event designated by the predicator; (b) a syntactic level that identifies the semantic participants as syntactic dependents of the predicate; and (c) principles of syntactic argument classification that anticipates, or leads to, the assignment of grammatical functions.

The model of argument structure provided by LFG contains all three components enumerated above. It thus provides a useful basis for describing derivational process in lexical argument structures. The outline of the relevant parts of LFG’s Lexical Mapping Theory (LMT) given in this and in the following section is based primarily on Bresnan & Zaenen (1990), Zaenen and Engdahl (1994), and Bresnan (2000).

At the semantic level of argument structure, LMT identifies the arguments (θ) of the predicate by their semantic (or, thematic) roles and orders them to a presumably universal hierarchy.

At the syntactic level, LMT provides a partially specified syntactic classification of the arguments via the features [+/- (thematically) restricted] and [+/- objective]. The arguments are associated with the syntactic classification according to the underlying lexical semantics of their thematic roles. The basic principles for determining the choice of syntactic features are as follows:

- (13)
- | | | |
|-----------------------------|----------|-------|
| patientlike roles | θ | |
| | | [- r] |
| secondary patientlike roles | θ | |
| | | [+ o] |
| other semantic roles | θ | |
| | | [- o] |

The features [+/- r] and [+/- o] constrain the way in which the arguments are mapped onto grammatical functions and group grammatical functions into natural classes:

- (14)
- | | | | |
|-------|--------------|--------------|-------|
| | | [- o] | [+ o] |
| [- r] | SUBJ | OBJ | |
| [+ r] | OBL θ | OBJ θ | |

(where OBL θ abbreviates multiple oblique functions, and OBJ θ abbreviates secondary objects). In this way, the principles in (13) enable the mapping from the semantic to the syntactic level for any predicate.

As an example, the ‘intrinsic’ syntactic classification of arguments in a transitive (i.e. two-place) predicate such as *bić* ‘beat’ can, therefore, be schematized as in:

- (15)
- | | |
|-------------|-------------|
| $\langle x$ | $y \rangle$ |
| [- o] | [- r] |

where *x* and *y* represent the semantic roles of the participants of the event designated by the predicator *bić* ‘beat’, which are taken here to be an agent and a patient, respectively. The ordering of the two participants reflects the prominence ranking determined by the thematic hierarchy, where an agent is more prominent than a patient.

3.2. Default mappings of arguments to syntactic functions

The argument structure exemplified in (15) mediates between lexical semantics and surface syntactic structure, as it already contains sufficient syntactic information to enable the mapping of arguments to surface grammatical functions.

The mapping of syntactically pre-classified arguments to grammatical functions obeys the so-called ‘Function-Argument Bi-uniqueness’ condition (Bresnan 1980; 2000), which requires that each argument in the argument structure is associated with a unique grammatical function, and each grammatical function corresponds to a unique argument. Given that, multiple restricted objects and obliques are, nevertheless, possible because these functions are further individuated by their semantic roles (ibid. 2000:311).

Since the negatively specified features in the diagram in (14) indicate unmarked feature values, the diagram can be read as a markedness hierarchy of grammatical functions, with SUBJ being the least marked syntactic function, and the restricted object (OBJ θ) being the most marked function. In LMT, the property of markedness of grammatical functions plays a role in determining the mapping of arguments to functions, and the principles according to which the syntactic realizations of the arguments are derived are formulated as follows:

- (16) Mapping Principles:
- a. Subject roles:
 - (i) a [- o] argument is mapped onto SUBJ when initial in the argument structure; otherwise:
 - (ii) a [- r] argument is mapped onto SUBJ.
 - b. Other roles are mapped onto the lowest (i.e. most marked) compatible function on the markedness hierarchy.

Taking the above as the point of departure, I would like to suggest a reformulation of the above principles to make full use of the markedness hierarchy:

- (17) Mapping Principle:
 The ordered arguments are mapped onto the highest (i.e. least marked) compatible function on the markedness hierarchy.

This alternative formulation achieves the same mappings for various classes of predicates discussed in the literature (including ditransitives and unaccusatives, for example), but avoids stipulating specific principles where their result is already partially determined by the markedness hierarchy. In this way, it avoids redundancy both in the account of the mapping itself, as well as in the formulation of any conditions or constraints pertaining to the subject. Since it makes redundant the Subject Condition ('Every predicator must have a subject'), it might be theoretically helpful in view of constructions which have posed problems of analysis due to, among other things, their non-standard behaviour with respect to the subject (e.g. impersonal constructions with 'genitive subjects'). It may also enable a reappraisal of causatives (with their multiple agentive arguments) as well as any other types of constructions in which the change in the predicate's meaning (lexical semantics) alters the semantic classification of the predicate's roles, which in turn brings about alterations in the syntactic realization of the arguments.

I argue, therefore, that it is the markedness hierarchy which determines the default mapping of the arguments to surface grammatical functions. The following is an example of the application of the Mapping Principle to the predicate *bić* 'beat' given earlier in (15):

- (18)
- | | |
|-------|-------|
| ⟨ x | y ⟩ |
| [- o] | [- r] |
| | |
| SUBJ | OBJ |

4. Alternative ('re-aligned') mappings of arguments to syntactic functions

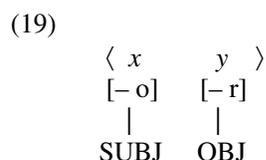
The fact that arguments of the predicate receive only partial syntactic classification – that is, they are in fact underspecified for grammatical function – invites a possibility of alternative mappings of the same arguments to syntactic functions. Most importantly, since a [- r] role can be mapped onto an object or a subject, in certain contexts (such as the passive or locative inversion) the grammatical function of the subject can be mapped onto an argument corresponding to a lower role on the thematic hierarchy than it would be otherwise. Another possibility of an alternative mapping is provided by the [- o] feature which allows an argument to be mapped onto a subject or an oblique.

These possibilities have been used in the analyses of passivization and locative inversion – two types of operation occurring in the argument structure which result in systematic alternations in the assignment of grammatical functions and which do not affect the lexical semantics of the predicate. Because of these properties, the operations have been referred to as morphosyntactic (e.g. Ackerman 1990; Sadler & Spencer 1998; Ackerman & Moore 2001), and argued to be "motivated by discourse considerations, in which grammars provide speakers with the means to take different perspectives on truth-functionally equivalent situations" (Ackerman & Moore 2001:3).

4.1. Passivization

Pairs of active and passive predicates are standardly assumed not to differ with respect to their lexical semantics, though their participants display alternative assignments of grammatical functions. Cross-linguistically, in an active transitive sentence the agent nominal is a subject, while the patient or theme nominal is a direct object. In its passive counterpart, however, the patient nominal bears the subject function, while the agent nominal, if it is syntactically expressed, has the grammatical status of an oblique. The fact that passivization involves a change in the mapping of arguments to syntax is now uncontroversial in lexicalist accounts, and – as indicated above – it is explained in LFG by resorting to the syntactic underspecification of the arguments.

Diagram (19) is a repetition of (18) and it represents the default – understood as ‘active’ in the context of the present discussion – assignment of final grammatical functions in the predicate *bić* ‘beat’:



while the following diagram (20) represents the alternative assignment of final grammatical functions in the same predicate after passivization:



The diagram in (20) represents only the final result of the application of the passive rule to a predicate – that is, the fact that the arguments of the predicate have received an alternative assignment of grammatical functions, which is possible due to the syntactic underspecification of the arguments. To account for the process which has produced this result, it is possible to put forward two alternative hypotheses for the primary operation at work in passivization. The two options – ‘demotion’ of the logical subject versus ‘promotion’ of the logical object – have been discussed extensively in theoretical, functional and descriptive literature. LFG’s analysis of the passive is essentially a ‘demotional’ account, and it seems to be confirmed as correct by the existence of impersonal passives of intransitives in many languages including Polish (cf. example (2) in the introductory section).

Using only the principles of LMT outlined above, I suggest that the mechanism which is involved in the process of assigning alternative grammatical functions in the passive is the ‘demotion’, or ‘downgrading’, of the highest (underspecified) argument by specifying that it must map onto a ‘restricted’ ([+ r]) grammatical function characteristic of obliques. The remaining argument (patient/theme) is then mapped onto its final function (subject) according to the Mapping Principle:



and the resulting construction is a personal passive which was illustrated earlier with the Polish example in (1). In the case of an intransitive (i.e. one-place) predicate, where there is no argument present which could be ‘promoted’ to subject position, the operation will result in an impersonal passive which can be represented as:

(22)

$\langle x \quad \rangle$
[- o]
[+ r]
|
OBL

passive

An oblique grammatical function is not obligatorily expressed in the syntax, and it has been observed that most passives, whether personal or impersonal, occur without the oblique agent (cf. Keenan 1985). Furthermore, in some languages the expression of the passive agent does not seem to be as easily acceptable in passives of intransitives, as in passives of transitives. This contrast occurs in Polish as well, where impersonal passives are usually preferred to be agentless, as in example (2) repeated below as (23):

(23)

Tutaj było tańczone (?/ przez uczniów).*
here was.3SG.NEUT dance.PART.SG.NEUT (?/* by students)
'The dancing was done here (?/* by students).'

though the syntactic presence of the passive agent is not always excluded in this type of construction:

(24)

Dzisiaj było już sprzątane – przez sprzątaczkę.
today was.3SG.NEUT already clean.PART.SG.NEUT by cleaners
'The cleaning has already been done today – by cleaners.'

In standard LFG accounts of the passive, the mechanism proposed for the re-alignment of the 'demoted' agent participant is, briefly, as follows. The agent argument becomes 'suppressed' and thus prevented from receiving any further syntactic specifications as well as, most importantly, from being mapped onto a syntactic argument. It is allowed to be linked to an 'argument adjunct' such as the *by*-phrase in English, but – since the argument adjunct is "not strictly speaking the expression of the same role as the subject in an active sentence" (Zaenen & Engdahl 1994:193) – the highest [- o] argument is in fact assumed to be syntactically unexpressed. The linking between the original agent argument and the new argument adjunct is established through coindexing the two arguments (or, roles). However, this creates a problem of there being two arguments in the argument structure corresponding to (or, bearing) the same thematic role, although passivization clearly does not introduce an alteration in the semantics of the predicate which could be understood as an addition of an argument or role.

Alternatively, as suggested by Alsina (1996:54-56) for English, the linking between the original agent argument and the new argument adjunct is established through the lexical entry of the preposition *by* which "specifies some information about the c[onstituent]-structure realization of an argument, and, so it can access a suppressed argument". As a result, two types of obliques need to be identified, depending on the semantic participant they express: those that map onto arguments (such as the locative) and those that map onto adjuncts (such as the passive agent). In contrast with arguments, adjuncts are not represented at the a[rgument]-structure level – and this seems to be a solution to the problem posed by the standard LFG analysis of the passive agent outlined in the previous paragraph. This alternative analysis is based on the assumption – which I will discuss, and argue for, in more detail in section 7 of this paper – that argument structure is a level of representation that is derived from the lexical semantic representation, but it is in fact distinct, and separate, from the semantic level. However, it requires the presence of an argument-taking preposition which would license the syntactic realization of an argument. In view of the fact that in some languages (such as Russian, or some other Slavonic), the oblique agent is expressed simply in a nominal marked for an oblique case (which, in Russian, is the instrumental), I suggest that the analysis which should be favoured remains the one outlined earlier in (21) and (22).

4.2. Locative inversion

The revisions in my analysis of the passive preserve the standard LFG analysis of locative inversion. Locative inversion, discussed extensively in Bresnan & Kanerva (1989) and Bresnan (1994) and referred to in Ackerman & Moore (2001), can be exemplified by the following pairs of sentences in English (25) and Chicheŵa (26):

(25)

- a. *Those visitors came to the village.*
- b. *To the village came those visitors.*

(Ackerman & Moore 2001, 2a and b)

(26)

- a. *Alendôwo anabwérá kumudzi.*
2-visitor-2 those 2 SB-REC PST-come-IND 17-3-village
'Those visitors came to the village.'
- b. *Kumudzi kunabwérá alendôwo.*
17-3-village 17 SB-REC PST-come-IND 2-visitor-2 those
'To the village came those visitors.'

(Bresnan & Kanerva 1989, 2b and 1b)

According to the principles of syntactic classification of arguments, the argument structure of the predicate 'come' in both languages can be represented as:

(27)

$$\begin{array}{cc} \langle x & y \rangle \\ [-r] & [-o] \end{array}$$

where the [-r] classification of the first argument indicates that its semantic role is more patientlike than agentlike (and that the verb patterns with other unaccusative predicates – a point which will be taken up in some more detail in section 7 of this paper). The default, i.e. 'uninverted', assignment of grammatical functions in (a) sentences can be derived as follows:

(28)

$$\begin{array}{cc} \langle x & y \rangle \\ [-r] & [-o] \\ | & | \\ \text{SUBJ} & \text{OBL} \end{array}$$

On account of their morphological, syntactic and phonological properties, the nominals denoting the 'visitors' in both of the (b) sentences are identified as objects, while the nominals denoting the 'village' are subjects. This alternative, i.e. 'inverted', assignment of grammatical functions in the (b) sentences, which has been argued to occur in the context of presentational focus, can be modelled by LMT in the following way:

(29)

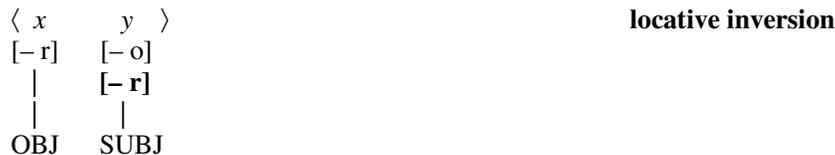
$$\begin{array}{cc} \langle x & y \rangle \\ [-r] & [-o] \\ | & | \\ \text{OBJ} & \text{SUBJ} \end{array} \qquad \text{locative inversion}$$

As in the case of passivization, the diagram in (29) represents only the final result of the application of locative inversion to a predicate, and this part of the analysis of locative inversion does no longer seem controversial – at least from a lexicalist perspective. However, similarly to the debate which was carried out a decade or two ago about the passive – namely, whether the primary operation of the passive is the

‘advancement’ of the logical object to subject, or the ‘demotion’ of the subject – it is possible to put forward two, empirically verifiable, hypotheses regarding the primary operation which is at work in locative inversion. A detailed discussion and the assessment of these hypotheses are beyond the scope of this paper. However, I would like to outline them very briefly and highlight those aspects of the preferred solution which will, unsurprisingly, show parallels with passivization and help bring out distinctive characteristics of these types of operation in contrast with the operation of impersonalization.

It was suggested by Bresnan & Kanerva (ibid.:26-28) that the mechanism which is involved in the process of assigning alternative grammatical functions in locative inversion is a special case of ‘subject default’: the first argument of a verb will be subject, unless special conditions (such as e.g. the first argument being [- r]) enable a lower [- o] argument to become subject by optionally characterizing it as thematically unrestricted ([- r]). When the location argument is a subject, the first (theme) argument must, then, be mapped onto object:

(30)



Although technically possible, the solution seems counterintuitive in that it imposes a ‘thematically unrestricted’ classification on an argument which had received an intrinsic syntactic classification of [- o] precisely because of its specific, non-core, thematic status in the argument structure. Although it is the second argument in the argument structure (which is often the position of the logical object), it did not qualify for the [- r] classification because it was associated with a specific, locative, semantic role. The suggested solution assumes that the primary operation in the locative inversion is the ‘promotion’, or ‘advancement’, of a locative argument to subject. It seems to be motivated by the ‘Subject Condition’ which requires every predicate to have a subject and organizes the mapping from arguments to grammatical functions SUBJ-centrally (cf. (16) versus the alternative proposal in (17)).

The alternative hypothesis views locative inversion not as triggered by ‘promotion’ of a lower argument to subject, but – similar to the passive – as ‘demotion’ of the highest argument to a lower grammatical function. In the old ‘re-mapping’ terminology this could be expressed as ‘demotion of subject to object’. In current LMT terms, this can be achieved by specifying that the highest (underspecified) argument must be ‘objective’ ([+ o]). According to the Mapping Principle, the remaining (underspecified) argument will be mapped onto subject:

(31)



Apart from the fact that restricting, rather than un-restricting, of the mapping seems to be a theoretically more plausible analysis of a process resulting in a marked, non-default, construction, the solution in (31) seems to be corroborated by some empirical evidence. Namely, the hypothesis in (31) predicts that locative inversion may be found with predicates which subcategorize for only one argument, since – like in the passive – ‘demotion’ of an argument involves a concomitant ‘promotion’ of another (lower) argument only if there is something to be ‘promoted’. This prediction seems to be confirmed by possible pairs of sentences such as:

(32)

- a. *And then, those visitors came.*
- b. *And then - came those visitors.*

where the locative inversion in (32b) can be accounted for as follows:



4.3. Complementarity of passivization and locative inversion

The representations of both locative inversion and passivization which were suggested in the previous two parts of this section follow straightforwardly from the assumptions and principles of LFG's Lexical Mapping Theory and are in accordance with monotonicity. The proposed analyses seem to account for the distinctive properties of the two resulting constructions and, when considered together, they emerge as complementary processes which are part of a larger system of operations occurring in the argument structure of predicates.

Specifically, it has been observed that there are cross-linguistic restrictions on the applicability of both passivization and locative inversion which are based on the distinction between unergative and unaccusative predicates. The operation of passivization applies only to unergative predicates – that is, those predicates whose most prominent argument is their underlying, or 'initial', subject (Perlmutter 1978). In the terminology of LMT, passivization is restricted to predicates whose first argument is classified as non-objective ($[-o]$), as in (15). The analysis suggested in this paper correctly predicts that the passive rule cannot be applied to unaccusative predicates – that is, those whose initial argument is classified as $[-r]$, as in (27) – because imposing a restricted marking ($[+r]$) on an unrestricted argument would violate the principle of monotonicity.

On the other hand, locative inversion has been demonstrated to apply only to unaccusative predicates (Bresnan & Kanerva 1989). Since, according to the analysis offered in this paper, the locative inversion rule specifies that the highest argument of the predicate must be 'objective' ($[+o]$), the rule cannot be applied to unergative predicates, as this would also violate the principle of monotonicity. The rule can, therefore, apply only to predicates in which the highest argument is classified as unrestricted ($[-r]$).

Essentially, both operations seem to serve the same purpose: they both target the highest argument of the predicate in order to degrade it to a lower grammatical function. The resulting alternative mapping of grammatical functions provides a means to take a different perspective on truth-functionally equivalent situations (Ackerman & Moore 2001:3) which is motivated by discourse considerations such as the choice of syntactic pivot and presentational focus. The difference between passivization and locative inversion lies in the scope of their operation, since they apply, respectively, to two complementary classes of predicates: unergatives and unaccusatives.

Analysing both passivization and locative inversion as 'demoting' rather than 'promoting' operations allows us, therefore, to see them as part of a system – which seems to be confirmed by the restrictions of their applicability. Since, on this account, the 'promotion' of an argument is only opportunistic in both of these operations, another advantage of this analysis is that it uniformly accounts for their applicability to both two-place and one-place predicates. The fact that no language seems to contain a passive strategy that solely defines impersonal passives (Blevins 2001:3), as well as – possibly – there is no language in which the only variant of 'locative inversion' is the one which does not contain a locative nominal, seems to indicate that the second, 'promoted' argument is somehow essential to these operations. This, however, can probably be explained by resorting to the discourse function of these operations: they may have arisen out of the need to shift the presentational focus or syntactic pivot onto an argument other than the highest one, in a situation where there is more than one argument present in the unaltered argument structure of the predicate.

5. Suppression of arguments

Unlike operations such as passivization and locative inversion which are function-changing operations, the Polish *-no/to* impersonal does not involve an alteration in syntactic function assignment. In a transitive

predicate, the underlying object is a surface object in a *-no/-to* impersonal, and – as was demonstrated in section 2 – the construction appears to have a syntactically active ‘covert’ subject which corresponds to its implied logical subject. It seems, therefore, that the *-no/-to* construction results from ‘blocking’ of the subject position – that is, ‘holding up’ the subject and preventing it from being mapped onto a categorial argument.

In LMT, a role, or argument, which cannot be mapped onto a categorial argument, is said to be ‘suppressed’. The most straightforward formulation of a suppressing rule is: “Do not map an argument to the syntax” (e.g. Falk 2001: 111), and it is notated:

$$(34) \quad \begin{array}{c} \theta \\ | \\ \emptyset \end{array} \quad \text{suppression}$$

If it is understood as a rule suppressing not the argument itself – in which case it would affect the lexical semantics of the predicate – but the argument’s syntactic function, then suppression seems to be just the way to account for what occurs in impersonalization. The *-no/-to* impersonal has a covert subject, but it is a subject which has been blocked by suppression. Suppression prevents the subject from being mapped onto a categorial argument and in this construction it is associated with dedicated impersonal morphology.

Since impersonalization operates outside the syntactic classification of the arguments, it should not be sensitive to the distinction between unaccusative and unergative predicates. This is indeed the case. In contrast with passivization which is restricted to unergatives, *-no/-to* impersonalization can be applied to both unergative and unaccusative predicates (including the verb ‘to be’ used with passive participles, as illustrated by example (6)), and with very few exceptions it is fully productive.

I suggest, therefore, that *-no/-to* impersonalization is an instance of the rule of suppression which blocks the final subject and prevents it from taking a syntactic argument:

$$(35) \quad \begin{array}{cc} \langle & x & y & \rangle \\ [-o]/[-r] & & [-r] & \\ | & & | & \\ \text{SUBJ} & & \text{OBJ} & \\ | & & & \\ \emptyset & & & \end{array} \quad \text{-no/-to impersonal}$$

Similarly to the morphosyntactic operations discussed in the previous sections, *-no/-to* impersonalization can be applied to a predicate regardless of whether there is another argument present in the argument structure or not, as long as the argument structure contains a final subject which the rule targets (cf. examples (3), (5) and (6)).

6. The passive and the impersonal: preliminary conclusions

The aim of this paper has been to discuss two distinct constructions in Polish which result from alterations in the argument structure of the predicate: the passive construction, and the impersonal construction ending in *-no/-to*. The latter one, often misclassified as an impersonal passive, raises important descriptive and theoretical issues.

The first issue concerns the existence of impersonal constructions and the way of accounting for them. I have demonstrated that, apart from overlapping with the meaning of the passive construction in some contexts, the *-no/-to* impersonal is indeed not passive, and – unlike in the true impersonal passive – its subjectlessness is very superficial. In this respect, the *-no/-to* impersonal patterns with analogous constructions in Finno-Ugric languages in which the primary voice opposition can be demonstrated to be personal/impersonal rather than active/passive. The existence of this type of construction in Balto-Slavic languages means that the approach to subjectlessness in theoretical frameworks needs to be reconsidered even for Indo-European languages.

The other issue, which is a consequence of this finding, is the need to distinguish between two types of operation in the argument structure of the predicate: demotion (as in passivization) and suppression (as in impersonalization). I have demonstrated that, in spite of the initially pessimistic view treating all subject-affecting operations as suppression, Lexical Mapping Theory reserves the resources with which it is possible to capture this distinction. Using the descriptive conventions of LTM, I have offered analyses of passivization and impersonalization which can be extended to other constructions believed to be part of the system of operations on the argument structure, and which preserve all the previous sub-claims about these constructions.

In the remaining part of the paper I will suggest further improvements to these analyses by refining the notion of the ‘argument’ and by arguing for the restoration of the early LFG distinction within the argument structure between semantic roles and argument positions. However, for reasons of space, the argumentation presented in the remaining sections will be considerably compressed.

7. The independence of argument positions and argument roles

Most of the current LFG analyses of passivization, as well as the outline of the revised analysis of passivization which I presented above, assume a two-tiered representation of argument structure. One of the tiers – the tier of the final classification of the arguments into syntactic functions (SUBJ, OBJ, ...) – is clearly a syntactic one and feeds directly into final syntactic structure. The other tier, however – the tier at which the semantic arguments of the predicate are identified (as *x*, *y*, etc.) and syntactically pre-specified ([– o], [– r], ...) – compresses two different levels of information: the semantic level of thematic roles and the syntactic level of argument positions subcategorized for by the predicate.

7.1. Unaccusativity and passivization

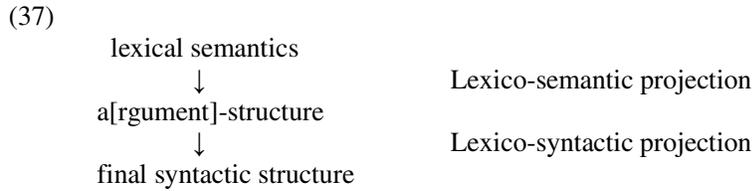
The need to separate semantic information from the syntactic representation of predicate’s valency presumably manifests itself most strongly in attempts to account for unaccusativity. In syntactic accounts of unaccusativity, the arguments of unergative and unaccusative predicates can be distinguished by resorting to the notion of their ‘underlying’ grammatical functions (e.g., respectively, the ‘initial’ subject and object of Relational Grammar; cf. Perlmutter 1978), or – as in LMT – by recognizing that the highest argument of an unergative predicate is non-objective ([– o]), while the highest argument of an unaccusative predicate is unrestricted ([– r]). LMT’s intrinsic syntactic classification makes it possible to refer to arguments independently of their thematic roles and grammatical functions, and captures the generalization that an unaccusative argument is not an object, but at the same time it is, underlyingly, not a subject.

The difficulty in applying this idea in analyses of constructions lies in the fact that, in most current LFG accounts, the arguments of the predicate are, in fact, identified with their thematic roles, even though unaccusativity and operations which are sensitive to it – such as passivization – have been recognized as essentially syntactic phenomena, and the notion of an ‘underlying slot which comes first, but which is not a subject’ is not easily expressible in thematic terms. In fact, it has been demonstrated that it is impossible to find a common semantic denominator for either the class of syntactically unaccusative, or unergative verbs (e.g. Rosen 1984; Wechsler 1995). Since it is uncontroversial that the two types of predicates display surface syntactic contrasts in a great number of languages, and since passivization and locative inversion occur – as has been argued here – completely at the syntactic level, it might be beneficial to restore the earlier LFG distinction between semantic roles and argument positions. I suggest, therefore, representing the two levels of argument structure as independent (though formally related through mapping):

(36)

x	y	- thematic roles
⟨ θ_1	θ_2	- valency/argument positions
	...	
	⟩	

– with argument positions further mapped onto final grammatical functions. Such a model is in agreement with the scheme which underlies the design of LFG as well as other lexicalist syntactic frameworks (Bresnan 2000:306):



Once the semantic component is extracted from the syntactic argument structure and posited as a separate level of representation, I would also want to argue, following Alsina (1996:37), that “although arguments are ordered in the a[rgument]-structure according to their thematic role, thematic role information is not represented at a[rgument]-structure” since “if thematic information is represented in the lexical semantic representation of predicates, it would be redundant to replicate this information elsewhere, as in the a[rgument]-structure”.

Such a model allows us to posit that the passive rule needs to refer only to the syntactic information about the arguments and that, in fact, thematic information is inaccessible to it. This is confirmed by the fact that passivization is restricted to a syntactically, not semantically, distinct class of predicates. In order to reformulate LFG’s passive rule in purely syntactic terms, we only need to state that instead of applying to the semantically most prominent role on the thematic hierarchy, it applies to the ‘underlying’ subject – that is, only to the unergative argument pre-specified syntactically as [- o]². By analogy, the locative inversion rule applies only to the unaccusative argument pre-specified syntactically as [- r].

7.2. Raising verbs

The distinction within the argument structure between semantic roles and argument positions is implicit in current LFG work concerning ‘empty’ (athematic) argument roles of raising verbs (Zaenen & Engdahl 1994; Bresnan 2000). In the a-structures of the subject-raising verb *seem* and the object-raising verb *believe*, given in (38a) and (38b), respectively:



the athematic arguments are represented outside of the angled brackets, which indicates that they do not belong to the set of semantic participants of the action denoted by the predicate. They nevertheless have a specific position in the argument structure relative to the other hierarchically ordered roles, which gives them greater or lesser priority in the mapping to grammatical functions. Having no semantic content, they receive the inherent syntactic classification of [- r].

It could be argued that, due to the nature of the athematic argument, both of these representations imply the existence of a distinct level of argument positions separate from the semantic level, and that the representations in (38a) and (38b) can be straightforwardly translated to the notation in (39a) and (39b):



These representations preserve very clearly the insight that the raising verbs subcategorize for three syntactic argument positions whilst they involve only two semantic participants.

² As argued by Blevins (2001), this restriction on passivization has not been invalidated by alleged passives of unaccusatives in languages such as Lithuanian or Turkish: the forms, related diachronically to the passive, which occur in ‘unaccusative’ and ‘double’ passives in Lithuanian (Timberlake 1982) have an evidential meaning that identifies them as part of the mood, rather than the voice, system of the language.

before argument structure. This observation is true of Polish anticausatives too, although the issue requires a brief clarification which regards the different status of the *by*-phrase as opposed to the various volitional expressions.

The fact that a *by*-phrase is disallowed in both English and Polish sentences with the intransitive *break* or *sink* is unsurprising:

(44)

- a. **The ship sank by Bill.* (Roeper 1987:268, 2a)
- b. **The window broke by Pat.* (Levin & Rappaport Hovav 1995:109, 65a)
- c. **Stoik się zbił przez Piotra.*
jar.MASC.NOM REFL broke.3SG.MASC by Peter
'The jar broke by Peter.' (meaning: 'Peter broke the jar.')

Whether analysed as a basically intransitive, or a derived intransitive verb, the verb's argument structure does not contain an argument which could map onto a passive oblique – there is no argument position which could be re-classified as a passive oblique and realized as a prepositional phrase which normally expresses a passive agent. The licensing of a *by*-phrase is essentially a syntactic phenomenon, and the sentences in (44) are syntactically ill-formed, i.e. ungrammatical.

The control of purpose clauses and volitional adverbials seems to be a different phenomenon in that in both English and Polish, sentences with the intransitive *break* or *sink* which contain purpose clauses or adverbials are not ungrammatical, but implausible in most semantic contexts. They are not syntactically deviant, but are uninterpretable unless the referent of the unaccusative argument is personified:

(45)

- a. #*The boat sank to collect the insurance.* (Roeper 1987:268, 3a)
- b. #*The window broke to rescue the child.* (Levin & Rappaport Hovav 1995:109, 65b)
- c. #*Stoik się zbił celowo.*
jar.MASC.NOM REFL broke.3SG.MASC on purpose
'The jar broke on purpose.'

The fact that there are semantic contexts in which purpose clauses and volitional adverbials in anticausatives are acceptable – that is, that they do not need to be licensed by the original sentient agent – seems to point to the conclusion that what licenses them is not just the presence of a specific semantic participant at the semantic level of representation of the predicate. They seem to require the presence of an argument position which is linked to a semantic participant whose referent is, or can be construed as, an agent. Control of purpose and other adverbial (e.g. temporal) clauses seems, therefore, to be a syntactic phenomenon, sensitive to syntactic differences at the level of argument structure, as much as a semantic phenomenon. Purpose and other adverbial clauses are sanctioned at the syntactic level of argument positions, and interpreted according to the semantics of the role which is linked to the controlling argument position. It can be argued that what sanctions them is the 'logical subject', understood as the first argument present in the argument structure which is accompanied by its original thematic role. In contrast with the logical subject, an 'agent' is identified solely at the semantic level and – as we have seen – its characteristics can be transferred onto a semantic participant which is not normally sentient or volitional.

Neither the unacceptability of the *by*-phrase, nor the control phenomena discussed above, seem, therefore, to exclude the possibility that the original agent role is still present in derived argument structures of intransitive (inchoative) verbs – since, as I have argued, both phenomena can be explained without referring to the agent of the basic transitive verb form. The presence of the original agent role is indeed confirmed by the possibility in Polish of expressing this role overtly in an (arguably) additional oblique argument similar to a secondary object or 'Dative':

³ The Polish sentence in (44c) is grammatically correct and semantically plausible if understood as: 'The jar broke because of Peter' – that is, for example, because Peter had put it in an unsafe place where it could easily be broken by someone else or by some other external cause.

(46)
Stoik mi się zbił.
 jar.MASC.NOM me.DAT REFL broke.3SG.MASC
 ‘The jar broke to me/in my hands.’

(47)
Piotrowi wylała się zupa.
 Peter.DAT spilt.3SG.FEM REFL soup.FEM.NOM
 ‘The soup has spilt to Peter.’ (meaning: ‘Peter has spilt the soup.’)

In most contexts there is no doubt about the fact that the dative nominal is to be interpreted as the real agent of the action, as opposed to the nominative argument which, though being a logical subject, is – at best – a ‘pseudo-agent’.

I suggest that in order to account for both the presence of the original agent role (which, at least in Polish, is available to be picked up by the syntax) in anticausatives, and at the same time for the absence of the argument position which would normally be linked to the original agent, we need to distinguish in argument structure the level of semantic roles as separate from syntactic argument positions. The separation of the semantic level from the syntactic level of representation allows us to hypothesize in what way the delinked agent role may become re-associated with another argument. One possible solution is illustrated in (48) which represents the sentences in (46) and (47), where *y* is the patient/theme, and *x* is the re-aligned agent⁴:

(48)

	<i>y</i>	<i>x</i>	
⟨	θ	θ	⟩
	[–r]	[+o]	
	SUBJ	OBJ _θ	

anticausative

7.4. *The impersonal reflexive*

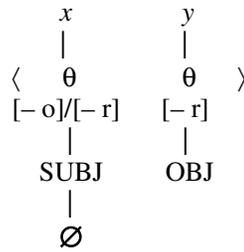
In a similar way to the anticausative, the analysis of another Polish impersonal construction, the impersonal reflexive, can be argued to require separating the semantic level from the syntactic level in the argument structure. The construction can be exemplified by:

(49)
Tutaj się tańczyło.
 here REFL danced.3SG.NEUT
 ‘There was dancing here./The dancing was done here.’

By analogy with the *-no/-to* impersonal, this construction can also be seen as resulting from the suppression of the final subject. It similarly possesses a covert syntactic subject and does not allow it to be expressed by a categorial argument in nominative case. With transitive predicates, it retains the logical object in the accusative case, and it is not restricted to either the unergative or the unaccusative class of predicates. The suppression of the final subject in this construction can be accounted for in the same way as in the *-no/-to* impersonal (cf. (35)):

⁴ The scope of this paper does not permit a more detailed discussion of this hypothesis.

(50)



impersonal

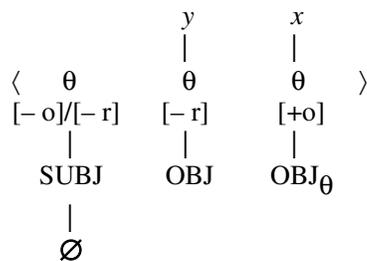
Where the impersonal reflexive differs from the *-no/-to* impersonal is not only in its morphological exponent, but also in that it can, arguably, involve a change in the lexical semantics of the predicate concomitant with the primary operation of suppression of the final subject. In brief, just as the anticausative, the impersonal reflexive may contain an overt syntactic expression of its agent role mapped onto a secondary object, or ‘Dative’:

(51)

Łatwo się kapralowi biło Piotra.
 easy REFL corporal.DAT beat.3SG.NEUT Peter.MASC.ACC
 ‘The corporal found it easy to beat Peter.’

I suggest that the agent role of the predicate which has undergone this type of impersonalization may become available to be picked up by the syntax in a way analogous to that proposed for the anticausative (cf. (48)), where *y* is the patient, and *x* is the re-aligned agent:

(52)



impersonal reflexive

The agent role can be re-associated (with a different argument) because the operation allows it to be freed up from the original, blocked, argument position. Although the syntactic classification of argument positions in an impersonal reflexive remains unaltered, the fact that the agent role is re-aligned, and a new argument position is added to the argument structure to accommodate it, means that the operation has to be regarded as morphosemantic – that is, meaning-altering.

The interpretation and the overt expression of the agent in the impersonal reflexive is, therefore, similar to that of the anticausative discussed in the previous section. The subject argument of the impersonal reflexive without the dative nominal is covert but interpretable (as agent). In the variant of this construction with the dative nominal, the covert subject is retained but its agentive interpretation is transferred onto an additional argument. As with the anticausative, the explanation of this fact requires referring to the semantic level of representation in the argument structure as distinct from the syntactic level of argument positions.

8. A revised analysis of the passive and the impersonal

This concluding section will provide a brief summary of the analysis of the passive and the impersonal which was given in earlier sections, this time taking into account all the revisions which have been suggested so far.

I have demonstrated that the Polish *-no/-to* impersonal is a distinct, non-passive, construction whose subjectlessness is very superficial. Although it does not allow an overt expression of the subject or agent, it

contains an interpretable, syntactically active covert subject. When applied to a transitive predicate, the *-no/-to* impersonal retains its logical object marked for accusative case. To account for this type of construction, I have suggested distinguishing between two types of operation in the argument structure of the predicate: suppression (as in impersonalization) versus demotion (as in passivization).

I have argued that passivization targets the ‘underlying’, or ‘initial’, subject of the predicate – it is, therefore sensitive to the inherent syntactic classification of the arguments of the predicate. It can be seen as ‘chômeurizing’ the most prominent, non-objective, argument of the predicate by imposing on it a [+r] marking. I have also suggested that since the restriction on the application of the passive rule to unergative predicates follows from the principle of monotonicity, it does not, in fact, have to be posited as a separate syntactic constraint.

Impersonalization, on the other hand, targets the ‘final’ subject of the predicate, preventing it from being realized in the overt syntax. As it operates on arguments which have been specified for their final grammatical functions, it is not sensitive to the unaccusative/unergative distinction, and it unproblematically retains the accusative object. It can be viewed as ‘suppressing’, or ‘blocking’ the subject in the way which has so far been suggested in LFG for the passive.

While passivization occurs completely at the syntactic level, altering grammatical function assignment but not the lexical semantic structure of the predicate, impersonalization is a function-preserving operation, though it can, in some constructions, involve an additional, concomitant alteration in the lexical semantics of the predicate – it can, therefore, be meaning-altering.

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