Towards a null theory of the passive*

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1 The typology of passives as a theoretical problem

The Principles and Parameters approach aimed to eliminate syntactic rules and constructions in favor of general movement processes and principles, and to account for language-specific syntax by construction-independent parameters. Disappointingly, much systematic syntactic variation, including the cross-linguistic variation in passives that is the topic of this article, turned out not to be reducible to construction-independent parameter settings. Subsequent work dealt with this residue by annotating individual functional heads with lexically specified uninterpreted features to encode their grammatical behavior. Completing the retreat from the parametric program, features of specific lexical items began to be made responsible for language-specific syntax. Differences between passives across languages were attributed to the different features of their passive morphemes or voice heads, in some cases even involving stipulations that de facto apply only in passives. The passive construction and the language-specific passive rules of pre-P&P days returned, albeit within a more ambitious theoretical framework.

A wholesale return to construction-specific syntax may be premature, however. Although the parametric program is mainly identified with GB and its successors, it can be pursued in other frameworks as well, and arguably with better results. Here I make this case for constraint-based theories which eliminate NP-movement and rely instead on argument structure representation, specifically on Lexical Decomposition Grammar (LDG, Wunderlich 1997, 2006, MS., Stiebels 2002).[1] A base-generated syntax driven by OT constraints can minimize construction-specificity by capitalizing on the parallel syntactic structure of different diatheses.

I will be arguing for the null hypothesis that a language's passive clauses have no passive-specific syntactic properties. Their syntax is predictable from the language's active sentences and the argument structure of passive predicates, which is derived from the argument structure of the basic predicate by an invariant operation triggered by the passive morpheme. This operation demotes (existentially binds) the most prominent Theta-role that is not already demoted. The affix is morphologically specified for whether it forms verb stems or adjectival/participial stems which combine with a finite auxiliary to form a periphrastic passive. Thus, the grammar of a language need not specify anything about the passive morpheme except its existence and its phonological and morphological properties (sections 3-6). The distribution of the adjunct phrases that express the logical subject of passives is governed by syntactic and semantic properties of the case or preposition that heads them (section 7, shared with non-passive constructions such as nominalizations.

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[1]Aspects of the analysis could also be articulated in Role and Reference Grammar (van Valin and LaPolla 1997, van Valin 2003), in LFG (Bresnan and Kanerva 1989) and a suitably elaborated version of OT Syntax (Legendre et al. 1994, Aissen 1999). It is wholly antithetical to Construction Grammar, at least on the interpretation where constructions are not violable constraints but templates, schemata, or gestalts.

The larger hypothesis, not pursued here, is that *derived predicates have no syntactic properties.* A learner who knows the grammar of active sentences of a language can predict the syntax of other diatheses.

Any theory has to face the cross-linguistic variation of passives and the many implicational universals that connect the features of passives to each other and to actives. Some dimensions of the typological space and the major landmarks in them are listed in (1).

(1) a. What verbs may passivize? (none / transitives only / transitives and some intransitives / all verbs)

b. Are there subjectless ("impersonal") passives? (none / intransitives only / all verbs)

c. Can there be an "agent phrase"? (none / transitives only / transitives and some intransitives / all verbs with at least one Theta-role)

d. Is lexical ("quirky") case on objects preserved under passivization? (yes / no)

e. In ditransitives (including derived causatives) which object passivizes? (highest / lower)

f. Do passives stack? (no / yes)

Universals of passivization are mostly of the implicational type. All the following generalizations are at least very strong tendencies.[2] Alleged exceptions to (2h) and (2i) will be argued in section 6 to be due to misanalysis.

(2) a. If a language has impersonal passives of transitives, it has (impersonal) passives of intransitives (Ackema & Neeleman 1998).

b. If a language has passives of intransitives, it has passives of transitives (Kozinsky 1981, Keenan 1985: 249, Ackema & Neeleman 1998, #305 in the Konstanz Universal Archive).

c. If a language has impersonal actives, its passives can be impersonal, but not conversely.

d. If verbs with sentential objects can be passivized, then verbs with lexical NP objects can be passivized (Keenan 1985: 272, #1149 in the Konstanz Universal Archive).

e. If a language's passives can have oblique subjects, so can its actives, and conversely.

f. If a language's passives can have expletive subjects, so can its actives, and conversely.

g. If a language's passives can passivize, so can its intransitives.

h. If a language has monoclausal passives, they are morphologically marked. No language marks passive and active verbs alike. (Haspelmath 1990).[3]

i. If a language has passives with agent phrases, these are optional.

j. If a particular type of agent phrase can occur with at least some kinds of nominals, then it can occur with at least some kinds of passives, and conversely.

[2] I have provided references where I could. Some are probably too obvious to have been formally documented; others may be original with me.

[3] Kozinsky's formulation (cited as #307 and #308 in the Konstanz Universal Archive) that "if active and passive voices differ in verb form, then the corresponding constructions differ from each other in the form of at least one of the nominal actants [and conversely]" presupposes that passivization is defined independently of verb form and actant form in some way. The definition of passive as subject demotion adopted here entails that a passive must differ from the corresponding active in the form of the most prominent nominal actant, otherwise it just is not a passive. That is why (2h) merely says that the verb in monoclausal passives is morphologically marked, a claim theoretically justified in section 3 and empirically supported in section 6 below.

k. If a language has prepositional passives, it has preposition stranding under A′-movement (Truswell 2008).

Typological research should not merely map out the variation in (1) and investigate the validity of the universals in (2), but derive the space of variation and the universals from the same constraints and principles that govern the morphosyntax of individual languages. Typology and theory benefit equally from the mutual challenges and support that this integration offers. We'll see that some putatively passive-specific generalizations are reducible to construction-independent universals. For example, (2a) is as true of actives as it is of passives, so it can be generalized to (3).

(3) If a language has impersonal sentences, it has impersonal intransitive sentences.

2 Critique of GB and minimalist approaches to passives

GB syntax claimed to reduce the diversity of passives with respect to points (1a) and (1b) to a small number of types specified by cross-classifying features of passive morphology. Even in this limited domain, the proposed typologies both overgenerate and undergenerate: many of the predicted passives don't exist, and many attested ones are not covered. I show this in the remainder of this section. In sections 3 and 6 I attempt a more comprehensive typology which addresses all of (1) and (2), and relies on true global syntactic parameters, rather than on parochial features of passive morphemes. We shall see that they are best modeled by the interaction of ranked defeasible universal constraints in the spirit of OT. In section 7 I argue that the distribution of agent phrases is governed not only by the general constraints on adjuncts which are responsible for (2h,i), but also by the semantics of their heads, which as (2j) implies is language-specific but not passive-specific.

GB treated the passive morpheme as an argument that absorbs case and is assigned a Theta-role (Chomsky 1981: 24, Jaeggli 1986, Roberts, 1987, Baker, Johnson, and Roberts 1989, Åfarli 1992). These theories were constructed to capture Burzio's generalization that if a verb has a non-thematic subject, it does not assign Case, now known to be false (see fn. 4 and 5 below, and in general Goodall 1993), and have largely been abandoned in favor of alternatives that locate the passive in the head of a functional category VoiceP or little *v*P.

Baker's (1988) pioneering GB typology of passives took as the defining property of passives that they either belong to the category INFL or are incorporated into INFL (and thus assigned a Theta-role); the former type of passive is moreover specified as having one of a set of Case requirements, a feature which would apparently be unique to passive heads. Baker's analysis depends on the basic assumptions in (4).

(4) a. No category can assign Case to itself.

b. Th-roles must be "PF-identified" either by Case or by Incorporation.

c. Infl must be assigned an external Th-role

Based on these assumptions, the passive morpheme may be of type (a1), (a2), (a3), or (b) according to its specification for the properties in (5).

(5) The Passive morpheme is *either*

a. an INFL, which either

1. needs Case: no impersonal passives (English), or

2. obligatorily takes Case if available: impersonal passives in unergatives only (Dutch, German. . .), or
3. optionally takes Case if available: impersonal passives in transitives and unergatives (Welsh, Irish, Ukrainian. . .),

or

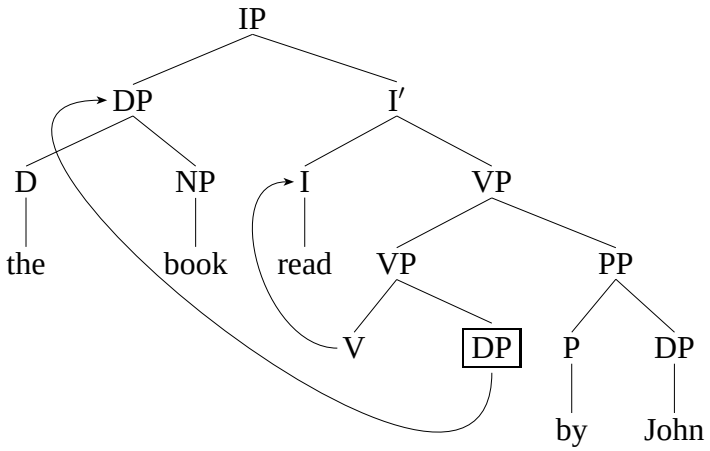
b. a Noun: all verbs have impersonal passives (North Russian, Lithuanian)

This is a clearly a construction-specific theory of the passive, in that the category of the passive morpheme and its Case properties have nothing to do with anything else in the language. Of the four types of passives it allows, one is attested, and it fails to allow at least one attested type of passive. This will now be briefly shown.

Baker's type (a1) PASS, which "needs Case", excludes impersonal passives and is exemplified by English. By (4b), it must be PF-identified. Since it is an INFL and not a Noun, it cannot be PF-identified by incorporation. On the assumption (4a) that it can't assign Case to itself, it must receive Case from the Verb. In order to receive Case from the Verb, it must move to Infl; the direct object moves to subject position to get NOM Case from Infl. But only transitive verbs can assign Case, so only transitive verbs passivize.

(6) shows the derivation of the English passive according to this analysis.

(6)



In fact, English is not of type (a1), for impersonal passives are freely formed from intransitive verbs with clausal complements, e.g. *It was hoped that John would leave*. The verb *hope* does not assign Case (**I hope it*), so PASS can't get Case from it, but the passive is still OK. There are languages with passives that apply only to transitive verbs, but English is not one of them. Nor does English fit into any of the other three types. It represents a fifth, fairly common type, in which impersonal passives are restricted to verbs with clausal complements. We will return to it in section 7.

PASS of type (a2), which "gets Case if possible", allows passivization of transitive and unergative verbs. Transitive verbs assign Case to PASS as in type (1a). Unergative verbs don't assign Accusative Case, but they have an external Th-role to assign to PASS, and they can passivize because PASS doesn't need case. Unaccusatives, though, can't passivize, for they neither assign Case nor an external Th-role, so PASS can't get assigned a Th-role.

It is doubtful whether type (a2) exists at all. Passivization of intransitives does *not* pick out unergative from unaccusative verbs, as identified by the standard unaccusativity criteria, such as state/location or change of state/location semantics, or the choice of perfect auxiliary (German

haben/sein, Italian *avere/essere*).[4] Instead, intransitives passivize if two conditions are satisfied: the language allows subjectless sentences (the EPP constraint is dominated), and their implicit argument is interpretable as Human or Agentive/Volitional. The independence of impersonal passivization from unaccusativity in German as diagnosed by *haben* vs. *sein* is illustrated in both directions by the examples in (7):

(7) a. Er ist gestorben. In jedem Krieg wird gestorben. (unaccusative *ist*, passive OK)
He is died. in every war is died
'He died. People die in every war.'

b. Es hat ihm genügt. *Es wurde viel genügt. (unergative *hat*, no passive)
It has him-Dat sufficed. It was much sufficed.
'It sufficed him. *There was a lot of sufficing.'

Type (a3), PASS which optionally takes case if available, allows the same types as (1b) plus impersonal passives of *transitive* verbs. This type does not exist either, for the same reason that type (1b) doesn't, namely that passivization of intransitive verbs does not depend on whether they are unaccusative or unergative.

In Baker's type (b), PASS is a Noun which gets incorporated into Infl. Since it can always get Case from Infl, it should have the freest distribution of any passive type, and should occur with transitive verbs with retained accusative objects, and with all intransitive verbs, regardless of unaccusativity. The prediction is that languages should allow impersonal passives of all intransitives just in case they allow impersonal passives of transitives. In fact, these two properties do not appear to be correlated. There are languages such as Lithuanian, Latvian, and Sanskrit, which form impersonal passives of all intransitives, including "unaccusatives", even the verb 'to be', but of no transitives. And there are languages such as Swedish, which form impersonal passives of transitives, and restrict impersonal passives to the "unaccusative" subclass of intransitives. Aleut reportedly allows both impersonal or personal passives of all intransitives and transitives (Golovko 2007).[5]

Lappin & Shlonsky 1993 proposed that PASS occupies Spec-VP and may be specified by two features, yielding another classification into four types.

(8) a. [± Th-role bearer]

b. [± Case absorber]

Impersonal passives arise when PASS is Th-role bearing, and transitive passives arise when PASS does not absorb Case. The typology improves descriptively on Baker's in that it makes the distribution of impersonal passives and transitive passives independent of each other, but it still does

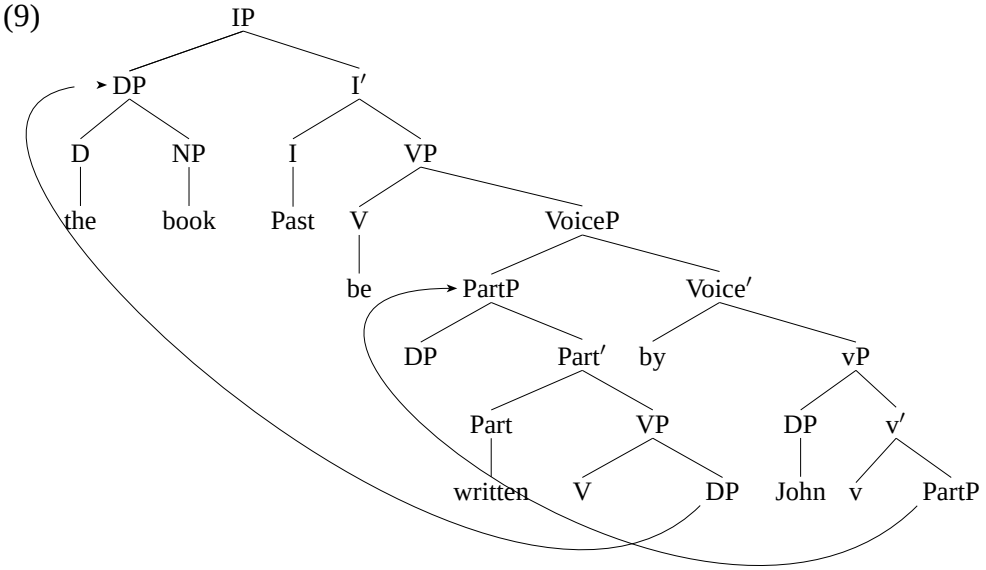
[4]See Zaenen 1993 for Dutch, Primus 2010 for Dutch and German, Engdahl 2006: 40 for Swedish, Maling 2006, Thráinsson 2007: 268. and Eythórsson 2008: 188, 202 for Icelandic, the latter with references to other Germanic languages. Also Albanian (Kallulli 2006b: 445), Lithuanian (Geniušienė 2006, Wiemer 2006: 277), and Turkish (see (57) below). As far as I know there is no language in which passivization of intransitive verbs applies exactly to the unergative class as identified by the standard diagnostics. Of course we could reject those diagnostics, but then unergativity becomes merely a diacritic for the ability of a verb to undergo impersonal passivization.

[5]For transitive impersonal actives in Slavic languages, see Sobin 1985 and Lavine 2010. The Irish "impersonal passive", morphologically distinct from the personal passive, has been argued to involve not demotion, but incorporation of a backgrounded specific indefinite human subject, explaining why, unlike personal passives, it does not allow agent phrases with *ag-* 'at', 'by' (Nolan 2006). Maling & Sigurjónsdottir 2002 have identified an innovative impersonal active construction in Icelandic, distinct from the passive; see Thráinsson 2007: 273 ff., and for a more critical view, Eythórsson 2008 and Jónsson 2009.

not go very far, and does not say anything about the relationship between a language's passive and active clauses.

Collins' 2005 Smuggling theory presents a solution to the locality problem raised by the movement of the object to subject position. It rejects GB's claim that passive expresses the external Theta-role and absorbs Case. Rather, the external Theta-role is assigned in Spec-*v*P, and its Case is checked by in the head of VoicePhrase above vP, the agent marker *by* (not a preposition, on this analysis). The Participle Phrase containing the object moves to the left of the *by*-phrase, and "smuggles" the object inside it over the external argument. After the Participle Phrase is raised, the object is extracted from it and moved to its higher subject position without incurring a violation of Relativized Minimality.

(9)

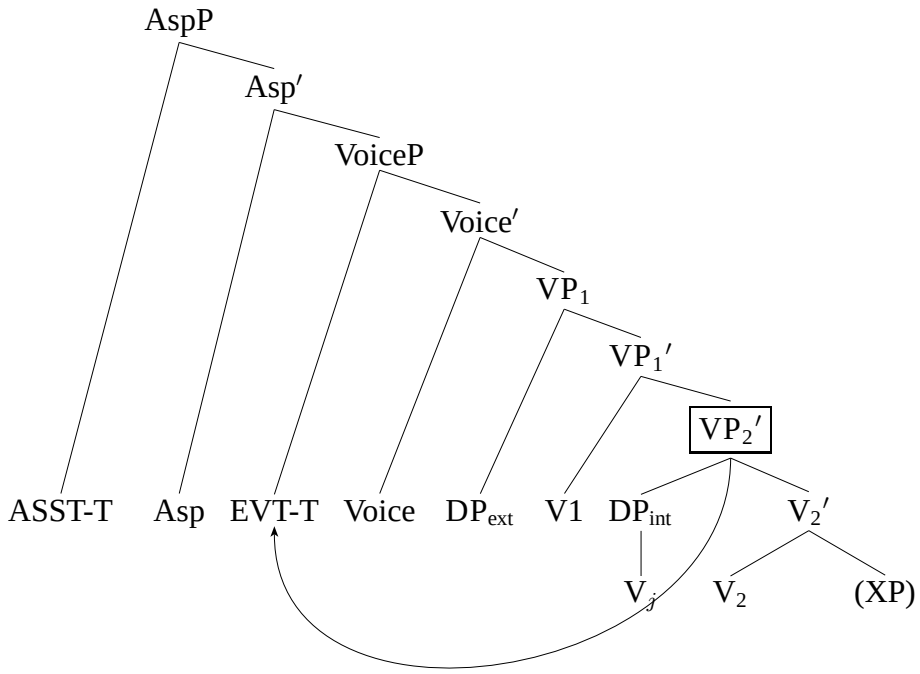


Collins motivates Smuggling solely for the sake of passives. In fact, it may be counterproductive elsewhere since it is not clear how unwanted violations of Relativized Minimality with A-movement are to be prevented. From the viewpoint of passive typology, the treatment of the preposition *by* as a Voice head is problematic because it dissociates it from its non-passive adnominal functions, as in *They insisted on collaboration by all members*. This analysis, therefore, leaves generalization (2j) in limbo. In languages that allow no agent phrases at all, the VoiceP would never have an overt head or complement. Another point is that reconstruction is not a sufficiently general solution to the passive logical subject's anaphora and control properties, which are parallel to those of implicit logical subjects of non-passive predicates across a large variety of languages.

The most recent literature explores the aspectual nature of passives.[6] Gehrke & Grillo (2009) treat passive as the movement of a verbal projection to the specifier of VoiceP, as Collins does, but with a different twist. For them, VoiceP is the complement of Asp, and the VP constituent promoted to it denotes the consequent (result or inchoative) state subevent.

[6]On the aspectually imperfective, atelic character of impersonal passives, see Abraham and Leiss 2006 and Primus 2010, among others.

(10)



This attractive approach would require some modification for dealing with impersonal and stative passives such as (11), where there can be no question of a consequent state.

(11) a. It was hoped/known that John had left.

b. The castle is surrounded by a moat.

c. The conclusions are entailed by the premises.

d. The money is owed/owned/needed by John.

Stative passives are clearly passives formally, but they describe ongoing activities or permanent states, not events with a result or consequent state.[7]

Another recent line of research explores the synchronic relation between passives, middles, anticausatives, and reflexives (Ackema & Schoorlemmer 1994, Lekakou 2002, Kallulli 2006a, 2006b, Koontz-Garboden 2009, Cennamo, Eythórsson & Barðdal MS., Alexiadou and Doron MS., among many others). It has long been known that these valency-reduced sentence types are historically interconnected in various ways, but the question remains how they should be represented and individuated synchronically, and whether they some of them can be unified at some abstract level of analysis. Kallulli proposes that passive suppresses the first feature in the predicate structure of a non-agentive activity predication, namely the [+act] feature on the *v* head. She suggests that typological variation involves different types of little *v* and different agent prepositions.

[7] A possible modification would be that passives denote simply states, and their result component comes not from the raised VP projection itself, but from aspectual features of the auxiliary or finite inflection with which it is combined, either perfective/inchoative (the 'result' passive) or imperfective/stative (the 'state'/'adjectival') passive. In German, for example, *werden*-passives denote activities (*es wurde getanzt* 'there was dancing') or achievements/accomplishments (*das Haus wurde gebaut* 'the house was built'), and *sein*-passives denote states (*das Haus war von Wasser umgeben* 'the house was surrounded by water'); there are in addition modal passives such as *Traditionen gehören gepflegt* 'traditions need to be [lit. belong] cultivated' (cf. Midwestern English *something needs done*). The passive auxiliary *be* would then have to be considered ambiguous between two aspectual meanings (e.g. *he was seated* (1) 'he sat down', (2) 'he sat').

3 Lexical Decomposition Grammar and the argument structure of passives

In this section I present an elementary typology of passives, recasting a previous GB-style OT analysis of personal and impersonal passives by Ackema & Neeleman 1998 to OT-based Lexical Decomposition Grammar. In section 4 I then extend it to case preservation and case non-preservation effects.

Lexical Decomposition Grammar claims that conceptual knowledge interfaces with syntax at a level of Semantic Form, where word meanings are represented by propositional structures built from a fixed vocabulary of primitive constants and variables. Verbs are represented by expressions in which Theta-roles are λ-abstractors over the variables in the function they denote. The semantic role of the variable over which the λ-operator abstracts fixes the Theta-role's semantic content, and its depth of embedding fixes its place in the thematic hierarchy. Passive and other relation-changing processes are operations on Semantic Form. The correspondence between Semantic Form and the morphosyntactic output is governed by a system of constraints. Implementing the constraints in OT allows them to be exploited in their full generality, since they can play an active role even when they are violated in deference to higher-ranking constraints. For example, the constraint that sentences must have nominative subjects can be active even in languages that have sentences without nominative subjects, either by triggering promotion of objects to subjects where available (Ackema & Neeleman 1998), or by forcing replacement of oblique case by nominative case in subjects (section 4 below).

Following a long tradition, I treat passivization as demotion. Specifically, a passive is an affix that demotes (existentially binds) the most prominent Theta-role that is not already demoted (Wunderlich MS.). The morpheme is specified for whether it forma a verb or a nominal. A verbal passive morpheme yields a derived verb stem that can be inflected for tense/aspect, a nominal passive morpheme yields an adjectival/participial stem that must be composed with an auxiliary that bears tense/aspect to form a periphrastic passive.

(12) $\ldots\lambda x$ VERB(x, $\ldots$) $\Rightarrow \ldots \exists x$ VERB(x, $\ldots$)

The demoted role is ineligible to bear structural case, hence is not assignable to direct arguments, such as subjects and objects. It remains present in argument structure, amd is interpreted by default as [+Human], unless it is otherwise specified by "agent phrases" formed with prepositions or semantic cases, whose range of lexical meanings differs across languages and determines the available non-default interpretation of passives.

Passivization falls in with other operations affecting arguments structure.

(13) a. Passive: demotes the highest Theta-role (valency reduction).
b. Antipassive: demotes all but the highest Theta-role (intransitivization).
c. Causative: adds a highest Theta-role (valency increase).
d. Applicative: adds a non-highest Theta-role (transitivization).

Passivization (unlike middle formation) is *not* intransitivization, as often claimed. Since demotion reduces the valency of a predicate (the number of its direct arguments) by one, passives of ditransitives are transitive (e.g. the passive of (14a) is (14b), which has the valency of (14c)).

(14) a. Ditransitive *give*: λzλyλx [x CAUSE [BECOME [y have z]]] (three direct arguments)
b. Passive *give-n*: λzλy∃x [x CAUSE [BECOME [y HAVE z]]] (two direct arguments)
c. Transitive *get*: λzλy [BECOME [y HAVE z]]] (two direct arguments)

And passives of intransitive verbs are subjectless ("impersonal"). That passives demote the highest Th-role, while antipassives demote all non-highest Th-roles, captures two important asymmetries between these two classes of affixes. The first is that whereas there exist impersonal (subjectless) passives, there are no impersonal antipassives (Tsunoda 1988, 636). The second asymmetry is that while there are transitive passives (such as *John was given a book)*, there are no transitive antipassives.

As far as direct arguments are concerned, then, the impersonal passive *be thought* is like the impersonal active *seem*:

(15)	a. It was thought that he'd leave.	It seemed that he'd leave.
	b. *Yesterday was thought that he'd leave.	*Yesterday seemed that he'd leave.
	c. John was thought to work.	John seemed to work.
	d. *It was thought something.	*It seemed something.
	e. *Something was thought.	*Something seemed.

Passives differ from actives of the same valency only by their implicit demoted logical subject, which can be expressed by an additional agent phrase, and, even if not so expressed, is visible to certain construal and anaphora processes in the same way as other demoted logical subjects, such as those of event nominals (e.g. Kiparsky 2002).

Since passive (and other marked diatheses) are operations on Theta-roles, it is correctly predicted that they cannot apply to expletive, improper arguments which receive no Theta-Role.

(16) *Improper arguments*

a. *rain:* λx [RAIN] (E.g. *It rains.*)

b. *come:* λy λx [y COME] (E.g. *There came a war.*)

Ackema & Neeleman 1998 construct the derivation and typology of passives from the markedness constraint (17a) and the two faithfulness constraints (17b,c).[8]

(17) a. EPP: A sentence must have a thematic subject.

b. STAY: The subject bears the most prominent Theta-role.

c. PARSE(PASSIVE): The input must be realized (no null parse is allowed).

The markedness of passive voice (generalization (2h)) follows immediately. The empty candidate is part of every candidate set, and since it violates neither STAY nor EPP, it would always beat every passive output. If all we have is markedness constraints on argument realization, any passive is HARMONICALLY BOUNDED by the corresponding active and by the null candidate — it cannot be optimal on any ranking. So, for passive sentences to be derived at all, at least one of

[8] I have reformulated them to conform to the approach adopted here, without materially changing their import. A&N's EPP (17a) says "VP must be A-bound", and their STAY (17b) says "Do not move", in accord with their assumption that the subject moves from a D-structure object position to the subject position. I reject NP-movement and view STAY as a correspondence constraint requiring the Structural Case features assigned to visible Theta-roles to match the grammatical case features in the morphosyntactic output. STAY is violated if the abstract Structural Case feature [–H(ighest)R(ole)] assigned to the second argument of a verbal predicate corresponds to a morphosyntactic nominative, which bears the case feature [+HR]. On the case features [±HR] and [±LR] see Kiparsky 1997, Wunderlich 1997.

those constraints must be dominated by a constraint PARSE, which requires the passive input to be realized. It follows that the input to passive sentences must have some distinctive formal property that triggers PARSE. A parallel argument applies to any marked diathesis or non-canonical pattern of argument realization. Hence only active voice can be unmarked, which subsumes (2h) as a special case.

In order to display the relevant bits of input and output structure in the tableaux compactly, I write the most prominent Theta-role as λx, and a DP bearing the Theta-role λx as DP_x. I will assume that there is also an event argument λe in the semantics, which is not an actant and does not receive a Theta-role or Structural Case. The subject is shown as the DP that precedes the V; thus V DP = impersonal (subjectless) transitive, DP V = personal intransitive, and so on. This is purely for the sake of compact notation and is *not* meant to imply anything about underlying or surface word order. For now, the term *impersonal* will serve as a cover for "subjectless" and "having a (possibly null) expletive subject"; these will be distinguished later.

Consider first languages where intransitives form impersonal passives and transitives always form personal passives, such as Latin, German, Lithuanian, and Sanskrit. These systems have the ranking PARSE ≫ EPP ≫ STAY.

(18)

Impersonal and personal passives		PARSE	EPP	STAY
1. λx λe V	a. V DP_x		*	
	☞ b. DP_x V			
	c. ∅	*		
2. λy λx λe V	a. V DP_x DP_y		*	
	☞ b. DP_x V DP_y			
	c. ∅	*		
3. λe ∃x V_{Pass}	☞ a. V_{Pass}		*	
	b. ∅	*		
4. λy λe ∃x V_{Pass}	a. V_{Pass} DP_y		*	
	☞ b. DP_y V_{Pass}			*
	c. ∅	*		

A glance at (18) shows that the ranking of this minimal constraint set only makes a difference for passives (sets 3 and 4). In actives (sets 1 and 2), the bearer of the sole or most prominent Theta-role (notated as DP_x) will emerge as the grammatical subject no matter how the constraints are ranked. In other words, candidates (1a, 1c) and candidates (2a, 2c) are harmonically bounded. Additional constraints introduced below will derive impersonal actives and quirky subjects, and generate the other implicational universals in (2). First, here are the remaining three types of passives in A&N's four-way typology based on the simple constraint set (17), this time omitting the active sentences since the outcome is always the same.

Only impersonal passives, of both transitives and intransitives, arise from the ranking PARSE, STAY ≫ EPP.

(19)

Only impersonal passives		PARSE	STAY	EPP
3. λe ∃x V_{Pass}	☞ a. V_{Pass}			*
	b. ∅	*		
4. λy λe ∃x V_{Pass}	☞ a. V_{Pass} DP_y			*
	b. DP_y V_{Pass}		*	
	c. ∅	*		

Languages where all passives are impersonal include Ute (Givón 1982), Hindi, and Finnish (see (20)).

(20) a. Minu-t vie-tiin ulos transitive impersonal passive
I-ACC bring-PASS.PAST out
'I was brought out.'

b. Pori-ssa ol-tiin ilois-i-a intransitive impersonal passive
Pori-INESS be-PASS.PAST happy-PL-PART
'People/they/we were happy in Pori'

Russian and modern Greek have personal passives of transitives, and no passives of intransitives, generated by the ranking EPP ≫ PARSE ≫ STAY.

(21)

Personal passives only		EPP	PARSE	STAY
3. λe ∃x V_{Pass}	a. V_{Pass}	*		
	☞ b. ∅		*	
4. λy λe ∃x V_{Pass}	a. V_{Pass} DP_y	*		
	☞ b. DP_y V_{Pass}			*
	c. ∅		*	

Finally, languages with no passive (e.g. Tongan, Malayalam, and Hungarian) have EPP, STAY ≫ PARSE.

(22)

No passives		STAY	EPP	PARSE
3. λe ∃x V_{Pass}	a. V_{Pass}		*	
	☞ b. ∅			*
4. λy λe ∃x V_{Pass}	a. V_{Pass} DP_y		*	
	b. DP_y V_{Pass}	*		
	☞ c. ∅			*

4 Case preservation and case non-preservation

Let us now extend this analysis to the more intricate phenomena of oblique case, its (non-)appearance on subjects, and its (non-)preservation under passivization, and to the interaction of these phenomena with personal and impersonal passivization. I will assume, uncontroversially, that a predicate can associate a particular case with a Theta-role in its lexical entry. Such non-structurally assigned, "quirky" cases are commonly preserved under passivization (the "Case Preservation Effect"), as shown for German in (23).[9]

[9]For a more fine-grained typology of non-structural case, see Donohue 2004.

(23) a. Man schmeichelte ihm.
one flattered him-DAT
'One flattered him.' (German)

b. Ihm (*er) wurde geschmeichelt.
him-DAT (*he-Nom) was flattered
'He was flattered.' (German)

On standard assumptions, German subjects can only be nominative, and (23b) is accordingly a subjectless (impersonal) sentence.

Not all languages preserve oblique case under passivization. In Classical Greek, the general pattern is that dative and genitive objects of two-place predicates become nominative subjects in passives (Smyth 1956: 396). For example, *pisteúō* 'trust' and *epibouleúō* 'plot against' assign dative case, but the datives regularly passivize as nominatives (24b) These nominatives are real subjects that agree with the verb, see (24c):

(24) a. hoῖs málista pisteúousin (Xenophon, *Cyropaedia* 6.1.29)
whom-DAT especially trust-3PL
'whom they trust especially'

b. hoì pisteuthéntes huph' hēmō̃n (Demosthenes, *Theocrines* 58.4)
who-NOM.PL trust-AOR.PASS.PRT-NOM.PL by us-GEN.PL

'the ones who were trusted by me'

c. pō̃s àn epebouleúsaimi autō̃i hó ti mὲ kaì epebouleúthēn hup' autoũ
how PRT plot-AOR-OPT-1SG him-DAT, unless also plot-AOR.PASS-1Sg by him-GEN
(Antiphon, *Tetralogy 3* 2.5)

'How could I have plotted against him, unless I had been plotted against by him.'

Ditransitives, on the other hand, passivize the accusative object (the thematically more prominent accusative if there are two of them) as nominative (Smyth 1956: 364). In example (25) this nominative bears the Source role.

(25) a. toútōn tὲn tīmὲn apostereῖ me (Demosthenes, *Aphobus* 2)
these-GEN.PL the-ACC value-ACC deprive-3SG me-ACC
'he deprives me of the value of these things'

b. hósoi híppous apestérēntai (Xenophon, *Cyropaedia 6.1*)
whoever-NOM.PL horse-ACC.PL deprive-PASS.3PL
'all who have been deprived of their horses'

Why does case preservation not apply in cases like (24)? And why do the datives behave differently in ditransitives like (25)? I propose that this is a case of the emergence of the unmarked. Case preservation in the passive of a sentence with only a dative object would give rise to a subjectless (impersonal) passive. But subjectless sentences are strongly avoided in Greek. Subjectless passives occur essentially only with propositional complements and necessity participles (*-teon*), and even there they tend to be avoided by raising. As predicted by our main hypothesis, passives (26) and actives (27) behave the same way in this respect.

(26) a. ēngélthē̄ Kũron nīkẽ̄sai
report-AorPass(3SG) Cyrus-ACC conquer-AORINF
'It was reported that Cyrus had conquered' (rare)

b. Kũros ēngélthē̄ nīkẽ̄sai
Cyrus-Nom report-AOR.PASS.3SG conquer-AORINF
'Cyrus was reported to have conquered' (preferred)

(27) a. dokeĩ moí tina elthẽin
seem-3SG me-DAT someone-ACC come-AOR.INF
'it seems to me that someone came' (rare)

b. dokeĩ tís moi elthẽin
seem-3SG someone-NOM me-DAT come-AOR.INF
'someone seems to me to have came' (preferred)

Outside of predicates with sentential complements, however, impersonal passives, and impersonal sentences in general, are extremely rare in Classical Greek, and they are nonexistent with ordinary one-place predicates like "run". The type German *es wird gelaufen*, Latin *curritur* 'people are running' (lit. 'it is run') has essentially no counterpart in Greek. In this respect, Greek is aligned with English. We'll say that in these languages sentences must have a nominative subject, and decompose this requirement into two constraints, the EPP introduced at (17a) above, which requires sentences to have a thematic subject) and (28):

(28) SUBJ/NOM: A subject must have nominative case.

Sentential arguments are like nominal arguments in that they receive a Theta-role, hence abstract Case, but differ in that they can't be marked for morphosyntactic case, such as as nominative or accusative (the CASE RESISTANCE property first identified by Stowell 1981). Therefore sentential complements can be complements of verbs such as *hope*, which assign a Theta-role but don't assign accusative case, and they can satisfy the EPP (17a), but they can't satisfy the SUBJ/NOM constraint (28). What they can do, however, is to satisfy (28) by an associated expletive, realized as *it* in English and ∅ in Greek.[10] This associated nominative bears the morphosyntactic case feature [+HR], and its correspondence to the abstract Structural Case feature [–HR] assigned to the object of the verbal predicate constitutes a STAY violation (fn. 8).[11] The variation in the distribution of expletives across languages then requires a Faithfulness constraint which prohibits expletives (such as *it*) (EXPL/S).

[10]The assumption that the expletive is associated with the complement goes back at least to Rosenbaum 1967.

[11]The licensing of sentential complements in subject position in English might be problematic for this account. I assume that they are either factive, or topics, in either case licensed by a null head to which they are in apposition. This actually makes sense of the characteristic discourse properties of subject complements. Compare e.g. *It follows from Fred's theory that nouns are verbs* with *That nouns are verbs follows from Fred's theory*. In the latter sentence the *that*-clause is understood to refer to a contextually salient proposition or fact.

(29)

English			EPP	SUBJ/NOM	PARSE	EXPL	STAY
1.	a.	It danced John				*	
	b.	danced John	*				
	☞ c.	John danced					
	d.	∅			*		
2.	☞ a.	It seemed that S				*	
	b.	seemed that S	*				
	c.	that S seemed		*			
	d.	∅			*		
3.	a.	It is died$_{Pass}$				*	
	b.	is died$_{Pass}$	*				
	☞ d.	∅			*		
4.	☞ a.	It is hoped$_{Pass}$ that S				*	*
	b.	is hoped$_{Pass}$ that S	*				
	c.	that S is hoped$_{Pass}$		*			*
	d.	∅			*		

We are now ready to derive the implicational generalization (2d): "if verbs with sentential objects can be passivized, then verbs with lexical NP objects can be passivized". Passivization of nominal objects is sanctioned when STAY is outranked by PARSE and EPP, which is the case in two of the four basic systems: (18) PARSE ≫ EPP ≫ STAY, and (21) EPP ≫ PARSE ≫ STAY. Passivization of sentential objects also requires one or the other of these rankings, *plus* the ranking of the constraint *EXPL that prohibits all expletive subjects from appearing at all (as in (29)). In other words, passivization of sentential complements requires the ranking that guarantees passivization of nominal objects, and another ranking in addition, hence the implication (2d).

Back to case non-preservation. It is enforced by the EPP and SUBJ/NOM constraints in collaboration with another constraint, MAXCASE:

(30) MAXCASE: A lexically associated ("quirky") case must be realized.

The interaction of these constraints, as determined by their ranking, handles the "parametrization" of EPP effects, to give a typology of case non-preservation, expletive subjects, and quirky subjects.

Classical Greek has the ranking in (40), with MAXCASE ranked below the three constraints displayed there, as well as below SUBJ/NOM. In the tableau, λx_Q shows a Theta-role lexically associated with quirky case, and DP_Q shows a nominal argument bearing quirky case. The ranking yields personal passives of transitives (candidate set 4), no passive of intransives (candidate set 3), obligatory subject, no oblique subjects (1/5, 2/6, and 7/8 are neutralized), and no case preservation in passives (8).

(31) Classical Greek: $\left\{\begin{matrix}\text{EPP} \gg \text{PARSE} \gg \text{STAY} \\ \text{SUBJ/NOM}\end{matrix}\right\} \gg \text{MAXCASE}$

Classical Greek		EPP	PARSE	STAY	SUBJ/NOM	MAXCASE
1. λx λe V	a. V DP_x	*				
	☞ b. DP_x V					
	c. ∅		*			
2. λy λx λe V	a. V DP_x DP_y	*				
	☞ b. DP_x V DP_y					
	c. ∅		*			
3. λe ∃x V_{Pass}	a. V_{Pass}	*				
	☞ b. ∅		*			
4. λy λe ∃x V_{Pass}	a. V_{Pass} DP_y	*				
	☞ b. DP_y V_{Pass}			*		
	c. ∅		*			
5. λx_Q λe V	a. V DP_{xQ}	*				
	b. DP_{xQ} V				*	
	☞ c. DP_x V					*
	d. ∅		*			
6. λy λx_Q λe V	a. V DP_{xQ} DP_y	*				
	b. DP_{xQ} V DP_y				*	
	c. DP_y V DP_{xQ}			*		
	☞ d. DP_x V DP_y					*
	e. ∅		*			
7. λy λe ∃x_Q V_{Pass}	a. V_{Pass} DP_y	*				*
	☞ b. DP_y V_{Pass}			*		*
	c. ∅		*			
8. λy_Q λe ∃x V_{Pass}	a. V_{Pass} DP_{yQ}	*				
	b. DP_{yQ} V_{Pass}			*	*	
	☞ c. DP_y V_{Pass}			*		*
	d. ∅		*			

The languages of the Ob-Ugrian branch of Finno-Ugric, comprising Vogul and Ostyak (also known as Mansi and Khanty), are like classical Greek in promoting obliques to passive subjects and avoiding impersonal sentences, but with some differences that further fill out the typology. According to Kulonen (1989: 258), "the demotion of the subject (Agentive) never normally occurs without the promotion of another actant to the subject position." Both direct objects and obliques turn into nominative subjects. Impersonal sentences are used only a last resort when there is no promotable object or oblique. Hence "canonical impersonal sentences in Ob-Ugrian contain only the predicate in the passive form of 3SG and possibly some adverbial constituents in oblique form".

(32) tox potərtawəs (Vogul, Kulonen 259)
so speak-PASS3SG
'so they spoke'

The only oblique complements that a passive sentence can have in Vogul are particles, which cannot be promoted to subject.

A sentence can have just one direct object; in three-place predicates this can be either the patient, in which case the recipient bears dative or lative case, as in (33a), or the recipient, in which case the patient bears instrumental or instructive-final case (Kulonen 198), as in (33b). In either case, the corresponding passive promotes the direct object to subject.

(33) a. äń poltsəm alk$_{o}$ätäl′ tatwəs (Vogul, Kulonen 200)
now sister-in-law-POSS.SG1SG somewhere bring-PASS3SG
'my sister-in-law was now taken away somewhere'

b. ēləmxōlas wojəŋsaməl totawən (Vogul, Kulonen 201)
human fat-ADJ eye-INSTR bring-PASS2SG
'you will be brought the fatty eye of a human being'

Vogul and Ostyak differ from Greek in the ranking of the first two constraints PARSE ≫ EPP, which accounts for the availability in of impersonal passives like (32) when no object or oblique can be promoted to subject position.

(34) Vogul: $\left\{\begin{matrix}\textsc{Parse} \gg \textsc{EPP} \gg \textsc{Stay} \\ \textsc{Subj/Nom}\end{matrix}\right\} \gg \textsc{MaxCase}$

Pers. pass. of trans., impers. of intrans.		PARSE	EPP	STAY	SUBJ/NOM	MAXCASE
1. λx λe V	a. V DP_x		*			
	☞ b. DP_x V					
	c. ∅	*				
2. λy λx λe V	a. V DP_x DP_y		*			
	☞ b. DP_x V DP_y					
	c. ∅	*				
3. λe ∃x V_{Pass}	☞ a. V_{Pass}		*			
	b. ∅	*				
4. λy λe ∃x V_{Pass}	a. V_{Pass} DP_y		*			
	☞ b. DP_y V_{Pass}			*		
	c. ∅	*				
5. λx_Q λe V	a. V DP_{xQ}		*			
	b. DP_{xQ} V				*	
	☞ c. DP_x V					*
	d. ∅	*				
6. λy λx_Q λe V	a. V DP_{xQ} DP_y		*			
	b. DP_{xQ} V DP_y				*	
	c. DP_y V DP_{xQ}			*		
	☞ d. DP_x V DP_y					*
	e. ∅	*				
7. λy λe ∃x_Q V_{Pass}	a. V_{Pass} DP_y		*			*
	☞ b. DP_y V_{Pass}			*		*
	c. ∅	*				
8. λy_Q λe ∃x V_{Pass}	a. V_{Pass} DP_Q		*			
	b. DP_{xQ} V_{Pass}			*	*	
	☞ c. DP_y V_{Pass}			*		*
	d. ∅	*				

Ostyak has the same basic system as Vogul (Kulonen 1989: 296). In (35b), the lative directional case is promoted to a nominative subject; the agent is marked by locative case.

(35) a. ewə täpət wojə pĕnt-a jŏxtot
girl(NOM) seven elks path-LAT came(3SG)
'the girl came to the path of the seven elks'

b. täpət wojə pĕnt ewə-nə jŏxtaj
seven elks path(NOM) girl-LOC came-Pass(3SG)
'the path of the seven elks was reached by the girl'

But Ostyak allows three additional marginal options not attested in Vogul:

a. Transitive impersonal passives.

b. Impersonal passives with a lative-marked directional phrase.

c. Impersonal passives with agent phrases.

These extra options of Ostyak are illustrated in (36).

(36) a. nŏ̆ŋət ilə onâltâsi̯ (Ostyak, Kulonen 267)
you-ACC (O) teach-PASS3SG
'you were taught'

b. imə-nə xăt xara pŏwta t'ŏxlat-aj (Ostyak, Kulonen 269)
'woman-LOC floor-LAT blow-INF start-PASS(3SG)
'the woman started to blow onto the floor'

(36a) is an impersonal passive with a retained accusative object, and (36b) is an impersonal passive with an oblique directional complement and a locative-marked agent phrase. These two options both involve impersonal sentences due to the failure to promote an oblique to subject. They can be derived by assuming an optional ranking which differs from that of Greek and Vogul in having EPP and STAY reversed. Formally, Ostyak has two competing grammars, derived from an underspecified constraint system in which EPP and STAY are mutually unranked. The additional ranking generates new optima in candidates sets 4, 7, and 8, as shown in (37).[12]

(37) Ostyak (alternative ranking): $\left\{\begin{matrix}\text{PARSE} \gg \text{STAY} \gg \text{EPP} \\ \text{SUBJ/NOM}\end{matrix}\right\} \gg \text{MAXCASE}$.

Impersonal passives with objects		PARSE	STAY	EPP	SUBJ/NOM	MAXCASE
4. λy λe ∃x V_{Pass}	☞ a. V_{Pass} DP_y			*		
	b. DP_y V_{Pass}		*			
	c. ∅	*				
7. λy λe ∃x_Q V_{Pass}	☞ a. V_{Pass} DP_y			*		*
	b. DP_y V_{Pass}		*			*
	c. ∅	*				
8. λy_Q λe ∃x V_{Pass}	☞ a. V_{Pass} DP_Q			*		
	b. DP_{xQ} V_{Pass}		*		*	
	c. DP_x V_{Pass}		*			*
	d. ∅	*				

[12] I return to demoted agent phrases in section 7.

The Ob-Ugric and Greek case non-preservation systems are closely related to the better-known type of case preservation found in Icelandic. Here the preserved oblique cases of objects function as grammatical subjects, just as oblique subjects in actives do (Eythórsson 2006: 178). For example, the passivized dative recipient *honum* in (39a) is a subject, as much as the passivized lower object *bókin* in (39b) is.[13]

(39) a. Honum voru oft gefnar bækur.
him-DAT were often given books-NOM
'He was often given books.'

b. Bókin var gefin honum.
book-the-NOM was given him-DAT
'The book was given him'

Icelandic has case retention (like German) but its passives of oblique objects are personal. Thus MAXCASE must dominate both PARSE and SUBJ/NOM. So we see that, when personal passives of transitives are permitted, then the constraints predict that the possibility of oblique subjects in passives correlates with the possibility of oblique subjects in actives. This is the formal derivation in our analysis of implicational generalization (2e).

(40) Icelandic: $\left\{\begin{matrix}\text{EPP, MAXCASE/NOM} \\ \text{PARSE}\end{matrix}\right\} \gg \text{STAY} \gg \text{SUBJ}$

[13]DPs with oblique case in Icelandic are licensed as subjects in virtue of the structural subject position they occupy, and the fact that — outside of certain three-place predicates where two passives are allowed, as in (39) — the grammatical subject bears the most prominent undemoted Theta-role:

(38) a. Mér brestur afl.
me-DAT lacks strength-NOM
'I lack strength.'

b. *Afl brestur mér.
strength-NOM lacks me-DAT
'I lack strength.'

Icelandic		EPP	MAXCASE	PARSE	STAY	SUBJ/NOM
1. λx λe V	a. V DP_x	*				
	☞ b. DP_x V					
	c. ∅			*		
2. λy λx λe V	a. V DP_x DP_y	*				
	☞ b. DP_x V DP_y					
	c. ∅			*		
3. λe ∃x V_{Pass}	a. V_{Pass}	*				
	☞ b. ∅			*		
4. λy λe ∃x V_{Pass}	a. V_{Pass} DP_y	*				
	☞ b. DP_y V_{Pass}				*	
	c. ∅			*		
5. $λx_Q$ λe V a.	V DP_{xQ} *					
	☞ b. DP_{xQ} V					*
	c. DP_x V		*			
	d. ∅			*		
6. λy $λx_Q$ λe V	a. V DP_{xQ} DP_y	*				
	☞ b. DP_{xQ} V DP_y					*
	c. DP_y V DP_{xQ}				*	
	d. DP_x V DP_y		*			
	e. ∅			*		
7. λy λe ∃x_Q V_{Pass}	a. V_{Pass} DP_y	*	*			
	b. DP_y V_{Pass}		*		*	
	☞ c. ∅			*		
8. $λy_Q$ λe ∃x V_{Pass}	a. V_{Pass} DP_{yQ}	*				
	☞ b. DP_{yQ} V_{Pass}				*	*
	c. DP_y V_{Pass}		*		*	
	d. ∅			*		

As seen in candidate sets 7 of (40), the ranking MAXCASE ≫ PARSE means that verbs taking quirky subjects don't passivize, which is correct for Icelandic (Thráinsson 2007: 257):

(41) a. Marga vantar peninga.
many-ACC.PL needs-3SG money-ACC.PL
'Many need money'

b.*Peningar eru vantaðir (af mörgum).
moneyNOM.PL are3PL needed-NOM.PL (by many-DAT.PL)
'Money is needed (by many)'

In some languages, case preservation is limited to a subclass of verbs. Faroese behaves like Icelandic with *bíða* 'wait for' and *takka* 'thank', but turns the dative of *hjálpa* 'help' into nominative in the passive (Thráinsson 2007: 185). Further research is needed to determine whether this difference is wholly arbitrary or predictable from semantic/thematic information. Russian has case non-preservation in a class of stative/imperfective passives. The oblique object of *upravljat'* 'rule' can change to nominative in the finite *-sja* passive. A larger group of verbs, such as *komandovat'*

'command', *rukovodit'* 'lead', *akkompanirovat'* 'accompany', get the nominative just with the participle (Lev Blumenfeld, p.c.). If this distribution is as lexically idiosyncratic as it appears to be, it would require a more fine-grained treatment, perhaps by means of lexically indexed constraint rankings (Pater 2000).

We have seen in this section that the distribution of subject types is parallel for actives and marked diatheses, specifically passives. Impersonal passives require the ranking EPP $\gg$ PARSE, which requires passive inputs to be realized in the output. Therefore, if a language has impersonal passives, it must also have personal passives as well (implicational generalization (2b)). This implication holds across diatheses: if a language has impersonal sentences of any diathesis, it must have personal sentences of that diathesis as well. If a language has impersonal actives, then EPP must be dominated, so its passives can be impersonal too (implicational generalization (2c)). But the derivation of impersonal sentences requires PARSE $\gg$ EPP to block the null candidate. But this ranking implies impersonal passives of intransitives. Therefore, if a language has any impersonal passives at all, it must have impersonal passives of intransitives (implicational generalization (2a)). And the availability of quirky case subjects and expletive subjects is predicted to be parallel for actives and passives (generalizations (2e) and (2f)).

The more complex the conditions on impersonal passives and actives are, the more striking the parallelism between them becomes. In North Russian, the object of a passive verb is Accusative if it is a pronoun or a masculine inanimate noun, and Nominative otherwise. But this is the general rule for objects of *impersonal* verbs in this dialect of Russian (Timberlake 1976).

The distribution of transitive impersonal passives confirms the prediction of the proposed approach. Polish and Ukrainian have transitive impersonal passives, as in (42),

(42) a. ścięto lipę (Polish, Keenan & Timberlake 1985)
cut-PASSNOMSGNEUT lime-ACCSGFEM
'The limetree has been cut.'

b. Cerkvu bulo zbudovano v 1640 roc'i (Ukrainian, Sobin 1985)
church-FEMACC be-PSTNEUT build-PTCNEUT in 1640 year
'The church was built in 1640.'

which are mirrored exactly by Ukrainian and Polish transitive impersonal *actives*:

(43) a. Las zasnuło mgłą (Polish, Siewierska 1984)
forest-ACC covered-PAST-3SG/NEUT fog-INSTR
'The forest was covered with a fog.'

b. Joho udarilo parotjahom (Ukrainian)
He-ACC hit-3SG/NEUT steam engine-INSTR
'A steam engine hit him.'

Here the instrumental overrides the expected [+Human] default.

5 Prepositional passive

Generalization (2k) states that prepositional passives (preposition stranding with A-movement) implies preposition stranding with A′-movement, but not conversely. The two are strongly correlated: most languages allow no preposition stranding at all, and English, Swedish, Norwegian, and some Kru languages (Koopman 1984) allow both types. But Maling and Zaenen 1990 note that Icelandic allows prepositional stranding under A′-movement, but not in passives (Danish is similar). Moreover, unlike A′-stranding, prepositional passives tend to be subject to semantic/thematic

restrictions. In particular, they obey an affectedness constraint, generally a reliable diagnostic of an argument structure operation, cf. the famous minimal pair:

(44) a. The bed has been slept in.
b. ?England has been slept in.

Even subcategorized prepositional phrases generally cannot strand prepositions in the passive if the verb is followed by an object or by an adverb (although Wh-movement is still permitted):

(45) a. *Wh-movement:* This is the shelf which they put books on.
b. *Passive:* *The shelf was put books on.

Most analyses of prepositional passives posit a reanalysis of the Verb + Preposition sequence as a single verbal predicate in the syntax, in effect a kind of preposition incorporation (van Riemsdijk 1978, Hornstein and Weinberg 1981). Bresnan (1982) and Maling and Zaenen (1985) locate the reanalysis in the lexicon (we can think of it as preposition incorporation at argument structure) and restrict it to prepositional passives, while attributing preposition stranding with A′-movement to syntactic conditions on extraction. Icelandic, on this account, lacks the lexical reanalysis but still permits the English type of Wh-movement. If both a lexical reanalysis is posited and Wh-movement is allowed to extract NPs from PPs, sentences like (46) have a straightforward account.

(46) What was the house broken into with?

As Hornstein and Weinberg noted, a reanalysis account of both types of preposition stranding needs two simultaneous mutually inconsistent reanalyses for such sentences, an impossibility in the syntactic framework they assume. A second good argument for the lexical reanalysis account of prepositional passives is that it explains their observation that reanalysis must apply in the base preceding all transformations.

Cases of transitive prepositional passives are quite limited in English; contrast (47a,b,c) with (47d,e).

(47) a. We were thrown rocks at every time we tried to take out the camera.
b. The house was set fire to.
c. The poor Cardinal's house was made an awful mess of.
d. *The kitchen was cooked food in.
e. *The house was put a new coat of paint on.

What prevents reanalysis in (47d,e)? Such restrictions on pseudo-passives have been variously interpreted. For Riemsdijk 1978 the reanalyzed string must be a 'possible word', for Hornstein & Weinberg 1981 a 'semantic unit', for Truswell 2008 it must 'describe a single event' (see also Coppock 2008). The intuition is appealing, but vaguely formulated. Moreover, the fact that Swedish and Norwegian allow more pseudo-passives than English undermines any such simple language-independent condition, semantic or otherwise.[14]

[14](48a,b) are from recent internet texts, (48c,d) are cited from Wellander 1959: 302 and date from the first half of the 20th century.

(48) a. Bebisen ammas, matas, badas och byts blöjor på. (Swedish)
baby-Def nurse-Pass feed-Pass bathe-Pass and change-Pass diapers on
'The baby is nursed, fed, bathed, and gets its diapers changed.' (*is changed diapers on)

b. ett hem som det lagades mat i (impersonal passive, Swedish)
a home that it made-PASS food in
'a home where food was cooked' (*a home that was cooked food in)

c. Mynten äro böjda, skurna i och brutna bitar av. (Swedish)
Coins-DEF are bent, cut into and broken bits off
'The coins are bent, they have been cut into, and bits of them have been broken off.'

d. De blevo uttagna tänder på. (Swedish)
They became taken-out teeth on
'They got teeth pulled out.'

Apparently transitive prepositional passives like (47) and (48) may be the result of the pseudo-incorporation process described by Asudeh and Mikkelsen (2000). The reason Swedish and Norwegian are more generous than English in allowing prepositional stranding with retained objects is then that they have more extensive pseudo-incorporation than English does, as their study shows.

If passives have no special syntactic properties, as we are claiming, the reanalysis of the verb+preposition complex should be visible in the syntax of active sentences as well. In fact, languages that allow prepositional passives also allow a verb plus a preposition to be parallel to a simple verb, as in (49).

(49) a. He himself ran towards and shot Faulkner.

b. He walked toward, and passed, the desk of Assistant Manager Meagan Patton.

c. The police shot at and injured the demonstrators.

Similarly in Swedish:

(50) a. Hon avseglade mot och nådde St. Nazaire. (Swedish)
she sailed-off towards and reached St. Nazaire

b. när K.L. i tåg 829 körde fram mot och passerade signalen (Swedish)
when K.L. in train 829 drove forth towards and passed signal-Def
'when K.L. in train 829 went on towards and passed the signal'

But languages that lack prepositional passives seem to reject this type of conjunction:

(51) a. *Etreksan pros ke pirovolisan tus diadilotes. (Greek)
ran-3Pl towards and shot the demonstrators
'They ran towards and shot at the demonstrators.'

b. *He ryntäsivät kohti ja ampuivat mielenosoittajia. (Finnish)
they ran-3Pl towards and shot-3Pl demonstrators-PlPart
'They ran towards and shot (the) demonstrators.'

c. *Mies ampui kohti ja haavoitti poliisikoiraa. (Finnish)
man shot at and injured police-dog-Part
'A/the man took a shot at and injured a/the police dog.'

Inasmuch as reanalysis/incorporation is independently determined by active sentences, the correlation confirms again the thesis that passive sentences have no special syntax.

Since our analysis takes the subject of passive sentences to be thematic, we predict that idioms which passivize, such as *take advantage of, keep tabs on* are those which are semantically compositional on other grounds as well most importantly because their parts can be modified (Nunberg, Wasow, and Sag 1994).[15]

(52) a. The FBI kept careful tabs on John.
b. Tabs were kept on John.
c. Fred took unfair advantage of Bill.
d. Advantage was taken of Bill.

Contrast unpassivizable idioms like *kick the bucket* and *hit the ceiling*:

(53) a. *John kicked an untimely bucket.
b. *The bucket was kicked by John.
c. *Mary hit the furious ceiling.
d. *The ceiling was hit by Mary.

On these assumptions, the implicational universal expressed by generalization (2k) follows. If prepositional passives are derived by combining verbs with prepositions into a unit in the lexicon or at a level of argument structure, then the possibility of prepositional passives ("preposition stranding with A-movement") necessarily implies the possibility of preposition stranding with A'-movement. For, on lexicalist assumptions, a reanalysis process in the lexicon must be visible to all of syntax, including A′-movement. But a reanalysis in the syntax will not conversely be visible in the lexicon or at argument structure.

6 Passive morphology

The generalization about implicit agents of passives is that they are human (or under certain pragmatic conditions animate agents). Even unaccusative verbs can passivize, as long as these conditions are fulfilled.

(54) Burada öl-ün-ür.
Here die-PASS-AOR
'Here it is died.'

*Burada sol-un-ur.
Here fade-PASS-AOR
'Here it is faded.'

(Turkish data from Inci Özkaragöz, p.c.)

Since the passive of a passive must be impersonal (see (55)), it falls under the same restrictions as passives of intransitives do, hence the implication (2g).

(55) a. Active: *döv-*: λyλxλe [x BEAT y](e) e=E
b. Passive: *döv-ül-*: λyλe∃x [x BEAT y](e) e=E
c. Passive of passive: *döv-ül-ün-*: λe∃y∃x [x BEAT y](e) e=E

A corollary is that in double passives (Özkaragöz 1986), *both* demoted Th-roles must be [+Human]. For example, in Turkish, (56b) can't refer to the beating of carpets.

[15] Since these idioms have two passives, we must assume their objects have a dual status, as thematic or nonthematic.

(56) a. Adam döv-ül-dü.
man beat-PASS-PAST
'The man was beaten.'

b. Bu oda-da döv-ül-ün-ür.
This room-LOC beat-PASS-PASS-AOR
'There is beating in this room.' (*It is beaten...)

The rarity of double passives illustrates a MORPHOLOGICAL BOTTLENECK: since passivization is effected by affixation, the distribution of passives is constrained by restrictions on the occurrence of passive morphology. Verbal double passives require either stacking of passive affixes, or deletion of one of the two affixes (haplology). Only morphologically very rich languages allow stacking of relation-changing affixes, illustrated by the Turkish double causative in (57).

(57) Sema Turhan-a kız-ı kay-dır-t-tı
Sema Turhan-DAT girl-ACC slip-CAUS-CAUS-PAST
'Sema made Turhan cause the girl to slip.'

It is among such morphologically rich languages that morphologically marked double passives are found.

Periphrastic passives can be doubled without affix stacking by putting the first passive affix on the participle of the verb and the second on the passive auxiliary. This method, available only in languages in which any verb can be passivized, is used by Lithuanian. Each round of passivization can leave a genitive-marked agent phrases, the first corresponding to the demoted logical subject, the second to the demoted derived subject of the first passive (Keenan & Timberlake 1985).

(58) To lapelio būta vėjo nupūsto
that-GEN leaf-GEN be-PASS.NOM wind-GEN blow-PASS.GEN
'that leaf was blown down by the wind' ('by that leaf there was blown down by the wind')

Sanskrit instantiates the deletion/haplology resolution of the morphological bottleneck on double passives. Sanskrit verbs can contain just one overt relation-changing affix. When a causative is passivized, the causative suffix before the passive suffix is deleted. However, its presence at an underlying level of representation is revealed by the vowel lengthening it triggers on the root, see (59a). Double passives are not possible, but anticausatives can be passivized, and then the two affixes (both *-ya-*) are reduced to one (see (59b,c)):

(59) a. kār -ay -a -ti → kār -∅ -ya -te
make -CAUS -ACT -3SG make -CAUS -PASS -3SG
'causes to make' → 'is caused to make'

b. bhid-ya-te kusūla-ḥ (svayam eva)
break-MPASS-3SG grain-holder-NOM (by itself just)
'The grain-holder is breaking (by itself)' (anticausative middle)

c. bhid-ya-te kusūle-na (svayam eva)
break-PASS-3SG grain-holder-INSTR (by itself just)
'The grain-holder is breaking (by itself)' (passive of b., Kāśikā on Pāṇini 3.1.87)

Typologically, double causatives are more frequent than double passives. Our constraints do not provide a formal explanation for this typological observation, but there is an asymmetry between causatives and passives which suggests an indirect one. Causatives are a valency-increasing operation which does not have any intrinsic upper limit, though it is often limited by a morphological constraint to a single application per predicate. Multiple causees may be expressed as oblique DPs, or remain unexpressed. The passive, however, as a valency-decreasing operation, does have an intrinsic lower limit, namely the number of Theta-roles that the predicate in question has available for structural case assignment and hence for demotion. Moreover, it is syntactically restricted by constraints on grammatical subjects. Also, passives are rather rarely inputs to valency-changing operations of any sort: causatives of passives are rare compared to passives of causatives, and aren't allowed in Sanskrit at all.

(60) kri -ya -te $\not\rightarrow$ *kri -ya -ay -a -te
make -PASS -3SG $\not\rightarrow$ make -PASS -CAUS -PRES -3SG
'is made' $\not\rightarrow$ 'causes to be made'

So generalization (2g) follows because double passives are subject to an extra morphological bottleneck compared to passives of intransitives.

Generalization (2h) states that passive is morphologically marked on the predicate, and generalization (2i) states that agent phrases are optional. Both have been repeatedly challenged. What is suspicious is that the putative counterexamples to each violate the other as well, which suggests that something else is going on. Siewierska 1984:35 claims that what Chung 1976 calls the Indonesian *Object Preposing* construction illustrated by (61) is a passive.

(61) Buku itu saja batja.
book the I read
'The book, I read.'

It violates both (2h) and (2i). Unlike Indonesian's true passive construction, Object Preposing does not allow omission of unspecified agents, and the verb in Object-preposed sentences has the bare stem form, like an intransitive verb (transitive and canonical passive verbs carry special prefixes). As in canonical passives, the object in (61) is fronted, but the subject, instead of appearing as a postverbal agent phrase, precedes the verb, and is optionally cliticized to it, as shown by its position between the auxiliary and the main verb:

(62) Mobil itu dapat kita perbaiki.
car the can we repair
'We can repair the car.'

It may also occur in a special proclitic form:

(63) Buku itu ku-beli.
book-the I-buy
'The book, I bought.'

Although Object Preposing has some discourse-functional similarities to Topicalization, it is unlike Topicalization, and like true passives, in that it has lexical idiosyncrasies, is clause-bounded, occurs freely in embedded clauses, and can cooccur with preposing to focus. Moreover, as with canonical

passives, the preposed logical object of the verb becomes a true subject, as unambiguously shown by raising and control.

If we assume (in line with Myhill 1988) that Object Preposing is *subject pronoun incorporation*, we can explain the properties of the construction. If the subject pronoun is incorporated into the verb, the sole remaining free argument is the object, and its promotion to subject follows as a necessary consequence. Because the logical subject is linked via incorporation to the verb, it is not marked by a preposition. The incorporation analysis also makes sense of the restriction noted by Chung that the construction is restricted to pronominal subjects, since pronouns are cross-linguistically among the most common incorporated elements, as well as of the cliticization which they are subject to in this construction. If incorporation is a kind of compounding, then the lexical idiosyncrasies are unsurprising. And if the subject is incorporated into the verb, then its omission is of course impossible:

(64) *Mobil ini akan perbaiki.
car this Fut repair
'This car is going to be repaired.'

More generally, if the subject is incorporated into the verb it should follow that it is rigidly attached to it in the syntax, and cannot be $\bar{A}$-moved away from it. Indeed, Chung (1975: 85) states: "Once Object Preposing has applied, the underlying subject cannot be moved or deleted by any other rule. For instance, the underlying subject cannot be focused or relativized."

(65) *Saja jang mobil itu perbaiki.
I Comp car the repair
'It's me that repaired the car.'

So an incorporation analysis explains both how the Indonesian Object Preposing construction is like a passive and how it is different from a passive. I conclude that Object Preposing in Indonesian is not, in fact, a problem for the view that passive is a morphology-triggered demotion operation.

Arka and Kosmas 2005 present another candidate of a morphologically unmarked passive from Manggarai, another Austronesian language:

(66) a. Aku cero latung=k
1s fry corn-1s
'I fry/am frying corn'

b. Latung hitu cero l=aku=i
corn that fry by-1s=3s
'The corn is (being) fried by me'

They show that in (66b) *latung* 'the corn' is the Subject, and the Agent *aku*, marked by the prepositional clitic *l=*, is syntactically a non-core argument, and conclude that (66b) is syntactically passive, despite the lack of a passive affix on the verb. At the same time, they argue that (66b) is not derived from (66a), on the grounds that subjects and objects in Manggarai obey different restrictions. In particular, subjects must be definite. But if (66b) is not derived from (66a), the relation between them is better seen as a transitivity alternation, such as English Dative Shift, or the alternation between the *-s* genitive and the *of* genitive. These processes are not affixally triggered but reflect alternative realizations of abstract case, triggered by a variety of grammatical and extra-grammatical factors, which in the Manggarai case include, in addition to the definiteness constraint, the constraint that only subjects can be relativized. On that interpretation, the status of the

agent as (near-)obligatory non-core argument is analogous to the *to*-dative in English three-place predicates.[16]

Finally, some putative unmarked passives may be really middles. In Saramaccan, a creole language of Surinam, bare transitive verbs have passive-like uses, which are "limited to a restricted class of ambi-transitive verbs whose essentially actional character is preserved in their passive use" (Winford 1988, see Alleyne 1994, Abraham 2006).

(67) di wosu ta mbei
the house ASPECT make
'The house is being built'

I conjecture that they involve Th-role suppression rather than demotion. The aspect morpheme *ta* and the progressive meaning suggest an analysis along the lines of older English *the house is building* and *the house is on building* 'is under construction'.

7 The agent phrase

Generalizations (2i) and (2j) are robust, but they are not enough to specify the language-specific distribution of agent phrases along the dimension (5c). The distribution of agent phrases appears to be regulated both by structural constraints and by the specific meaning of the case or preposition that is available to mark them in the language.

Let us first distinguish between SUPPRESSION and DEMOTION of Theta-roles. In terms of LDG, suppressed roles are not syntactically projected at all, thus not visible at argument structure, though they are visible in the semantics. The English middle is a standard instance of argument suppression. It involves a radical intransitivization of the predicate, such that only one semantic argument is projected as a Theta-role.

(68) These children teach (*French) easily (*by John).

Since suppressed arguments are not syntactically visible, they can't control implicit subject of purpose clauses, or be restricted by *by*-phrases and by adverbs like *willingly, deliberately*. They are only present in the conceptual representation: any teaching event implies a teacher, a recipient of the teaching, and a thing-taught.[17]

Languages differ on whether they have agent phrases at all, and if they have them, whether thay are allowed in impersonal passives.

The limiting case is represented by Finnish and Latvian, whose verbal passives are agentless. This is not a passive-specific fact, for picture nouns also have no agent phrases of the type *an opera by Mozart*. These languages simply lack a preposition or semantic case that specifically expresses the logical subject relation. In adnominal contexts, the genitive can express (among numerous other relations) also agency/authorship, in picture nouns as well as in participial passives:

[16] Another counterexample to (2h) and (2i) that has been cited is Acehnese (Lawler 1977), but according to Durie 1988 its "passive" is an unmarked active; a dissenting opinion in Legate 2008.

[17] The discussion below is restricted to verbal passives and adjectival/participial passives with auxiliaries, such as English *be.* Combinations of the latter with lexical verbs, such as English *get*, Swedish *bli*, German *bekommen*, will not be covered. Also omitted will be inverse constructions (not passive because there is no valency change), and the various adversative, abilitative, generic, and evidential meanings that are sometimes associated with passives, and passive-like constructions such as the Chinese *bei*-construction (which Huang 1999 argues is base-generated). All of these pose additional problems because they involve interactions of passivization with other phenomena.

(69) a. Mozartin ooppera (Finnish)
Mozart-GEN opera
'the/an opera of/by Mozart'

b. velje-n osta-ma sormus (Finnish)
brother-GEN buy-PART ring
'the ring bought by brother'

c. brāļa pirktais grezens (Latvian)
brother-GEN buy-PART ring
'the ring bought by brother'

Since genitives must be adnominal, they are not available as passive agent phrases for verbal passives.

Languages that do have agent phrases in turn fall into two types, thosw that allow agent phrases in all passives, and those that have the only in personal passives.

(70) a. No agent phrases in impersonal passives: Swedish, Icelandic (Thráinsson 2007: 270), Vogul (section 3), Turkish, Nez Perce, Mojave, Kannada, Maasai, Spanish, Italian (Siewierska 1984: 94)

b. Agent phrases allowed in impersonal passives: German, Danish, Lithuanian, Latin, Ostyak

Swedish illustrates the type that disallows agent phrases in impersonal passives.

(71) a. Det kämpades hårt (*av alla deltagare).
It was-fought hard by all participants
'People (All participants) fought hard.'

b. Sedan dansades det (*av barnen).[18]
Then danced-Pass it (by children-the)
'The there was dancing (*by the children.).'

The corresponding sentences in German are acceptable:

(72) a. Es wurde (von allen Teilnehmern) hart gekämpft.
It was by all participants hard fought
'People (All participants) fought hard.'

b. Dann wurde (von den Kindern) getanzt.
Then was by the children danced
'Then there was dancing (by the children).'

In Lexical Decomposition Grammar, this distinction can be formally characterized in terms of abstract case. Agent phrases in languages like (70a) have the property that they must restrict an underlying transitive subject (i.e. which bears the abstract case [–Lowest Role]). Evidence for this analysis is that intransitive eventive nominals (infinitives, participles, nominalizations) show the same contrast between Swedish and German as in (71) and (72).[19]

[18] With the agent phrase, (71b) is good only as the passive of a transitive, for example with *det* referring to a dance.

[19] A reviewer finds (73a) unacceptable with the agent interpretation. The unintended object interpretation 'smoking of children' is certainly prominent, but evidence from actual usage shows that it is genuinely ambiguous. A Google search of the verbatim string "das Rauchen von Kindern" (2012-03-17) nets 62 hits, all with the agentive interpretation. The other German examples in (73) are also based on internet data.

(73) a. Das Rauchen (von Kindern) ist verboten. German
Rökning (*av barn) är förbjudet. Swedish
'Smoking (by children) is prohibited.'

b. Das Tanzen (von allen Teilnehmern) geht weiter. German
Dansandet (*av alla deltagarna) fortsätter. Swedish
'The dancing (by/of all participants) continues.'

c. Das Geschrei / Gelächter (von Kindern) ist überall zu hören. German
Skrik / skratt (*av barn) hörs överallt. Swedish
'Shouting / laughter (of children) is heard everywhere.'

Note that this is not simply a syntactic restriction on *av*-phrases per se: *en samling av konst* 'a collection of art' is grammatical in Swedish, and *ett porträtt av Rembrandt* 'a portrait of Rembrandt' is ambiguous, as is its English counterpart. The generalization about *av*, then, appears to be this:

(74) a. The preposition *av* can mark an existentially bound actant of a verbal or nominal *transitive* predicate, such as the passive *porträtteras* 'is portrayed', the action noun *porträttering* 'portrayal', and the result noun *porträtt* 'portrait'.

b. The preposition *av* cannot mark the existentially bound sole actant of a verbal or nominal *intransitive* predicate, such as that of the (impersonal) passive *skrattas* 'is laughed' and the action noun *skratt* 'laugh'.

In terms of the case theory mentioned in secrion 3, the agent phrase expresses an agent that has the abstract Case [–LR], that is, abstract ergative case.

(75) a. dance: λx λe DANCE(x)(e) e=E

b. danced_{V} (passive): λe ∃x [x DANCE](e)

c. dance_{N}: λe ∃x [x DANCE](e)

d. portray: λy λx λe [x PORTRAY y](e)

e. $\text{portrayed}_{\text{V}}$ (passive): λy λe ∃x [x PORTRAY y](e)

f. portrait: λy λe ∃x [x PORTRAY y](e)

Danish and at least some varieties of Norwegian seem to be more like German in accepting agent phrases with impersonal passives (Hovdhaugen 1977: 24) with eventive nouns, as in 'dancing by children' (Norwegian *dans av barn*, Danish *dans af børn*).

The distribution of agent phrases is also subject to more fine-grained constraints, which appear to be tied to the specific meaning of their heads, and not to morphosyntactic conditions. The grammaticalized prepositions and cases that mark them may retain semantic properties on top of their purely structural function of marking the logical subject. For example, a further restriction on agent phrases in German is that they must denote agents of volitional actions:

(76) a. Es wurde (*von allen Teilnehmern) viel herumgelegen.
It was (by all participants) much lounged
'One (*All participants) lounged around a lot.'

b. Es wird (*von den Kindern) immer schlechter geschlafen.
It is (by the children) always worse sleep-PassPart
'People (*The children) are sleeping worse and worse'

The assumption that "agent phrases" are not intrinsically tied to passivization, and express a meaning which is independent of any particular construction, makes sense of several generalizations. (2j) says that an agent phrase that occurs with at least some of a language's nominals also occur with at least some of its passives, and conversely. If there are languages where agent phrases are strictly restricted to passives, they are at least very rare. Kazenin's 2001 claim that the Indonesian preposition *oleh* is restricted to passive agent phrases does not seem to be quite true, for usages like *Puisi oleh Taufik Ismail* "Poetry by T.I." are normal. Hebrew is another possible counterexample, but its agent phrase *'al yedey* also marks agents of derived nominals, as in *ha-hoxaxa šel he-te'ana 'al yedey ha-matematika'it* 'the proof of the claim by the mathematician'.[20]

Moreover, many languages have not just one passive "agent phrase" that specifies every kind of demoted logical subject, but several semantically differentiated ones, each of which has corresponding uses outside the passive. For example, German distinguishes *von* and *durch*, in passives as well as in nominalizations, in a way that corresponds to two meanings of the English *by*-phrase. In *John was killed by a falling rock* (where German would have *durch*) the *by*-phrase is interpreted not as an agent or instrument, but rather as kind of a manner adverbial, answering the question *How was John killed?*[21]

The indefinite [+Human] default interpretation is widely attested (see Siewierska 1984: 96, Shibatani 1998, and Wiemer 2006: 281, with lists of languages). We have seen that is not restricted to impersonal passives. Conversely, it is just the default. It cab be defeated by explicit agent phrases in languages that have them. In languages that do not have them, auch as Finnish, it is quite strict: (77) cannot refer to an event where someone was killed by a bear.

(77) Hänet tapettiin
himACC was killed
'He was killed'

But where available, an overt agent phrase can defeat the default interpretation by specifying a non-human agent. Their range of lexical meanings of the case or preposition that heda them differs across languages and determines the available non-default interpretation of passives.

(78) a. The castle is surrounded on all sides. [human surrounders only]
b. The castle is surrounded on all sides by water.
c. John was seen breaking into the house. [the seer is human]
d. John was seen breaking into the house by the dog.
e. The cave was entered. [the enterer is a person — not smoke, or an animal]
f. The peritoneal cavity was entered by a bullet.
g. It was expected that there would be food in the house. [can't be said of a raccoon]

What about (79), then?

(79) a. The valve was broken.
b. The valve was broken by the water pressure.

[20]The example is from Borer (`www-rcf.usc.edu/~borer/forming.doc`), who suggests, in part precisely because of the agent phrase, that these nominalizations are passive. An appeal to an elided participle (e.g. "…[discovered] by the mathematician") would be implausible, also in view of the contrast in (83) below.

[21]See George 2005 for instructive discussion of the semantic variety of agent phrases in classical Greek.

(79a) has two readings. As a verbal passive, it implies a human "breaker". As an "adjectival passive", no agent argument is implied, it just means the valve was "kaputt" (perhaps it broke "by itself"). In (79b), the *by*-phrase supersedes the default interpretation of the verbal passive.

The Lithuanian examples (80) (and their translations) are from Timberlake 1982:

(80) a. Čia snausta.
here drowse-P.PASS.NT.SG.NOM
'(Someone) has drowsed here"

b. Girių čia snausta.
forest-FEM.SG.GEN here drowse-P.PASS.NT.SG.NOM
'Forests have drowsed here.'

In Lithuanian evidential passives the agent must be specified obligatorily, in which case it is unrestricted (Geniušienė 2006: 54).

The [+Human] default interpretation is not specific to passive agents. It is shared with other implicit arguments, such as those of modals and pro_{arb} (Emonds 2000, Ch. 10), and with a class of overt subject pronouns (e.g. German *man*, French *on*) and object pronouns (e.g. Swedish *en*). As B. Lyngfelt (p.c.) points out, the demoted objects of a type of generic intransitivization, characteristically with verbs denoting 'annoying' behavior, is also construed as [+Human]:

(81) a. hunden bits (Swedish)
dog-the bite-Pass
'the dog bites'

b. sobaka kusa-et-sja (Russian)
dog bite-3Sg-Pass
'the dog bites'

c. sā̄xw-xat- '(tends to) kick' (said of a horse), from sā̄nxw- 'kick',
wā̄nkrt-axt- '(tends to) butt' (said of a cow), from wā̄nkrt- 'butt'
(Vogul, Liimola 1971, 16. The suffix -axt/-xat is reflexive and antipassive.)

The implicit argument of modal predicates works this way too: they have a logical subject that can't be expressed by a direct argument but can be specified by a *for*-phrase, as illustrated in (82).

(82) a. It is possible to be an honest prime minister.

b. *It is possible to be an even prime number. [odd because people can't be numbers]

c. It is possible for a prime number to be even.

d. It is necessary to die. [can't be said of a flower, unless you "personify" it]

e. It is necessary even for a flower to die.

Artifact-denoting nouns have implicit logical subjects which denote the designer or maker of the artifact. These logical subjects by themselves allow only the [+Human] interpretation of the *by*-phrase.

(83) a. A house by Corbusier. A landscape by Olmsted.

b. *A nest by my parrot. *A hill by ants.

c. A nest built by my parrot. A hill built by ants.

For some predicates, the default interpretation can be displaced by contextual information. Impersonal passives of verbs like “neigh”, “hatch”, “bloom” with an appropriate understood non-human animate agent are OK in Dutch, German (Primus 2010), Swedish, Icelandic (Sigurðsson & Egerland 2009: 168), and Finnish.

(84) a. Noch maximal 2 Wochen, dann wird geblüht. (German, internet)
Still maximally 2 weeks, then is flower-P.PASS
‘Two more weeks at most, then there will be blooming.’

b. Det blommas och knoppas i södern. (Swedish, internet)
it bloom-P.PASS and bud-P.PASS in south-DEF
‘There’s blooming and budding in the south.’

c. Kesällä kukittiin jo niin kauniisti. (Finnish, internet)
summer-ADESS bloom-P.PASS already so beautifully
‘This summer there was already such pretty flowering.’

This is apparently not possible in Lithuanian (Wiemer 2006: 300), though some weather verbs allow impersonal passives without a specified agent, apparently in both the evidential and the regular interpretation (Timberlake 1982, Geniušienė 2006: 39, 55).

(85) Naktį (lietaus) lyta
night-ACC (rain-GEN) rainP.PASS.NT.SG.NOM
‘at night it rained’ (evidential)

Primus 2010 argues that “volition, sentience, or self-organized motion” is sufficient to license implicit agents in German and Dutch, and cites examples like (86).

(86) a. Gestunken wird bei starkem Erschrecken.
stink-PPP is at strong-Dat fright-Dat
‘stinking [by ferrets] occurs as a reaction to strong fright.’

b. Aber geblüht wird nur, wenn die Pflanze auch etwas älter ist.
but blossom-PPP is only when the plant also a bit older is
‘But there is blossoming only when the plant is a bit older.’

c. Gequietscht wird immer erst nach Stillstand.
squeal-PPP is always only after stopping.
‘squealing occurs always after coming to a halt.’ [about a defective sound system on a model train]

However, these appear to be subject to the further restriction that theu must express lawlike general statements. For episodic reports, the [+Human] interpretation seems more or less obligatory. For example, in contrast to (86c), *gestern wurde wieder gequietscht* ‘it was squeaked again yesterday’ can hardly be said felicitously about a model rain.

I draw two conclusions from the rather complex distribution of agent phrases, of which this section has just provided a few illustrations. The first conclusion is that it straddles nominal and passive predicates in a pattern that supports the typological generalization (2j). The second conclusion is that distribution of agent phrases is governed by lexical and semantic factors as well as by syntactic factors, most evidently by the range of available prepositions and/or semantic cases and of their meanings and/or abstract Case features. Even in this idiosyncratic domain we find no evidence of passive-specific syntax.

8 Conclusion

The typological space in (1) and the basic generalizations in (2) can be derived from OT-based Lexical Decomposition Grammar. The result is essentially due to two non-standard features of this framework. First, base-generated syntax captures the systematic co-variation in the structure of active and passive sentences across languages by capitalizing on their parallel syntactic structure. NP-movement accounts fail in so far as they posit different kinds of s-structures for active and passive sentences of the same valency, and more generally for sentences with simple and derived predicates. Secondly, OT allows universal constraints to play an active role even when they are violated in the language due to higher-ranking constraints, in contrast to the classical Principles and Parameters framework, where a parameter setting is inviolable if it is turned on, and plays no role if it is turned off. Seen from the OT-LDG perspective, variation in passive syntax reflects the interaction of construction-independent constraints governed by different constraint rankings. I also argued that the distribution of agent phrases is, in addition to being subject to structural constrains, also governed by the language-specific lexical semantics of their heads. Generalized to other diatheses, the larger conjecture would be that derived predicates are parasitic on simple predicates.

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