

Coming to grips with exceptions

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Abstract

Based on a general definition of the concept of exception, the problematic nature of exceptions is made explicit by showing how they weaken the generality of descriptions: they disrupt a superclass without forming a principled subclass. Focusing on examples from syntax, three approaches to dealing with exceptions are identified.

1. Why are exceptions a problem?

1.1. Defining exceptions

Typical exceptions are a small subclass of a class where this subclass is not otherwise definable. What this means is that apart from their deviant characteristic that renders them exceptional, there is no additional property that distinguishes them from the regular cases. Given also that the exceptional subclass has generally much fewer members than the regular one, exceptions can be characterized as a subclass of a class that is weak both quantitatively (fewer members) and qualitatively (only a single distinguishing characteristic).

The description of an exception must include five components:

- the pertinent domain;
- the class within which the items in question are exceptional, which we will call superordinate class (or superclass for short);
- the regular subclass and the irregular subclass;
- the characteristic in which the two subclasses differ; and
- the relative size of the two subclasses.

This is shown in (1) on the example of English nominal plurals, where RSC labels the regular subclass and ESC is the label for the exceptional one¹.

(1) - domain: English

- superordinate class: plural nouns

- subclasses: RSC: *apples, cats, pencils, etc.*
ESC: *oxen, children, brethren*
- distinguishing property: plural suffix is {s} versus /ɔn/
- relative size of membership: RSC > ESC

Three components of the schema call for comments. Starting with **domain**: a structure may be exceptional within a language, a dialect of a language, a language family, a language area, or across languages. M. Cysouw's paper in this volume is a study of crosslinguistic exceptionality and so is part of S. Featherston's article.² It is important to indicate the domain within which an exception holds because exceptionality is relative to it. First, what is an exceptional structure in one language may not be exceptional in another. An example is the morphosyntactic alignment of subjects of one-place predicates with patient-like arguments of two-place predicates: this is regular in ergative languages but exceptional in accusative languages. Second, language-internal and crosslinguistic exceptionality do not necessarily coincide. For example, click sounds are very numerous in Zulu but very rare across languages; and passive constructions are infrequent in Kirghiz, but frequent across languages.

A second set of comments has to do with the **distinguishing property** of the exceptional class. Several papers in this volume emphasize the unique nature of exceptions. B. Kabak and I. Vogel are very explicit about this point as they analyze Turkish vowel harmony and stress assignment and argue for the need for lexical pre-specification of the irregular items as both necessary and sufficient for an adequate account. J.G. Jónsson and Th. Eythórsson also emphasize that truly exceptional structures have no correlating properties. They show genitive objects in Icelandic to be clearly exceptional by this criterion, as opposed to accusative subjects, which show subregularities.

As two of the papers in the volume show, items may differ from the regular class in more than one characteristic. G. Corbett discusses lexemes that show higher-order exceptionality by multiply violating normal morphological patterns. Utilizing the WALS database, M. Cysouw computes rarity indices for languages and language areas and shows that they may be multiply exceptional to varying degrees. Paradoxically, exceptions that differ from the regular subclass in more than one way are less exceptional by our definition since each exceptional property finds its correlates in the other deviant characteristics.

Lexical items may be exceptional not by structurally deviating from others but by exhibiting skewed, rather than balanced, frequency patterns of their alternative forms. For example, the passive form of the English verb *convict* occurs with unusual frequency relative to the passive of other verbs. Such "soft exceptions" are in the focus of Th. Wasow, F. Jaeger, and D. Orr's paper (this volume) as they explore correlates for the omission of the conjunction *that* in English relative clauses.

The third comment pertains to **relative size**. Note that having fewer members is a necessary but not sufficient characteristic of an exceptional subclass. That it is necessary can be shown by the example in (1): without reserving the label "exception" for the smaller subclass, English nouns whose plural is formed with {s} would qualify for being the exceptions even though intuitively we do not to consider them exceptional.

But being a small subclass is not sufficient for exceptionality. For example, of the English verbs whose past tense form ends in {d}, relatively few employ the allomorph /ɔd/. But this subclass of verbs is not exceptional because the members have a phonological property in common that defines them as a principled, rather than random, class.

An apparent counterexample to the regular class having more members than the exceptional class(es) is nominal plural marking in German. There are five plural markers: -0, -e, -(e)n, and -s; which – if any – should be considered the regular one? Although most nouns of the German lexicon take -(e)n, Clahsen, Rothweiler, and Woest (1992) argue convincingly that -s is actually the default form: it is the only productive one, used with names (e.g. *die Bäckers*) and with

newly-minted words such as clippings (e.g. *Loks* for *Lokomotiven*) or loan words (e.g. *Kiosks*). Given that relatively few existing nouns are pluralized with *-s*, declaring this form to be the regular ending would seem to conflict with the general pattern of the regular class having a larger membership than the exceptional ones. However, there is in fact no conflict: the very fact that *-s* is productive expands indefinitely the class of nouns that take it as their plural suffix.

1.2. Two problems with exceptions

Why are exceptions a problem? The short answer is that they fly in the face of generalizations. This is so due to two aspects of their definition. First, by token of the very fact that they form a subclass of a class, they conflict with a generalization that would otherwise hold for the entire superordinate class.

This problem so far is not specific to exceptions: it is posed by all instances of subclassification: subclasses, by definition, compromise the homogeneity of a superclass. But as long as the subclasses have at least one characteristic other than the one that the split is based on, the loss of the supergeneralization is compensated for by a sub-generalization that describes the subclasses.

For an example of regular subclasses, let us consider those English nouns that form their plural with the suffix {s}. This is not an undivided class in that the particular shape of the suffix is variable: *-/s/*, *-/z/*, and *-/ðz/*. However, each subclass is definable by phonological context: */-ðz/* after alveolar and palatal fricatives and affricates, */s/* after other voiceless sounds and */z/* after other voiced sounds. Thus, none are exceptions.

Exceptional subclasses are different from normal subclasses of this sort because they have no additional characteristics to independently identify them. This is the second reason why exceptions pose a problem: they do not only scuttle a generalization that would otherwise hold for the entire superordinate class but they do not allow for a generalization about their subclass, either. The fact that exceptions have much fewer members than their sister-classes compounds the problem: their sporadicity suggests that correlating properties may not exist at all: they may be random chance phenomena.³

All in all: exceptions disrupt supergeneralizations without supporting sub-generalizations. In the case of English noun plurals, the two generalizations that the exceptions disallow are given in (2).

(2) (a) supergeneralization lost:

**All English nouns form their plural with {s}.

(b) subgeneralization not possible:

**All those English nouns that form their plural with */ðn/* have property P.

The two problems posed by exceptions can be similarly illustrated with a crosslinguistic example: phoneme inventories that lack nasal consonant phonemes.

(3) - domain: a sample of languages

- superordinate class: consonant phoneme inventories

- subclasses: RSC: consonant phoneme inventories of English, Irish, Amharic, etc.

ESC: consonant phoneme inventories of Quileute, Puget Sound, Duwamish, Snoqualmie, Mura, Rotokas

- distinguishing property: presence versus absence of nasal consonant phonemes

- relative membership: RSC > ESC

The two generalizations disabled by the exceptional consonant phoneme inventories are as follows:

(4) (a) supergeneralization lost:

**All consonant phoneme inventories of languages include nasal consonant phonemes.

(b) subgeneralization not possible:

**All those languages that lack nasal consonant phonemes have property P.⁴

The lesser number of nasal-less languages suggests once again that their occurrence is for no reason: it may be an accident.

How are the twin problems posed by exceptions responded to in linguistic analysis? The purpose of this paper is to address this question by surveying the various ways in which exceptions have been dealt with in syntax. The alternatives fall into three basic types. First, many descriptive frameworks represent exceptional structures as **both exceptional and non-exceptional**. What this means is that the representation of the exceptional structure is split into two parts: one shows it to be exceptional but the other part draws it into the regular class. Second, there are proposals for regularizing exceptions: re-analyzing them so that they turn out to be **fully unexceptional**. And third, some accounts acknowledge exceptions as such and try to **explain** why they are exceptional.

The three options of accommodating, regularizing, and explaining exceptions will be discussed in the next three sections in turn.

2. Accommodating exceptions in syntax

Let us consider ways of representing syntactic exceptions as hybrid structures, part exceptional and part regular. The idea is similar to psychiatrists ascribing deviant behavioral traits of people to a separate persona coexisting with the normal personality. Four such approaches may be identified in the literature:

- two faces of a single representation
- two strata in a single representation
- separate representations in a single component
- separate representations in separate components

We will take a closer look at each.

2.1. Two faces of a single representation

In this type of account, exceptional and non-exceptional characteristics of a construction are represented on opposite sides of the same structural diagram. An example is Katalin É. Kiss's transformational generative account of long-distance agreement in Hungarian (É. Kiss 1987: 226-243).

In Hungarian, the verb agrees with both its subject and its direct object. Person agreement with the object is illustrated in (5).

- (5) (a) *Én szeretné-m őt.*
I would.like-S1SUBJ.3OBJ him
'I would like him.'

(b) *Én szeretné-lek* *téged.*
 I would.like-S1SUBJ.2OBJ you_S
 ‘I would like you_S.’

However, verb agreement in sentences such as (6) is unexpected.

(6) (a) *Én szeretné-m* *látni őt.*
 I would.like-S1SUBJ.3OBJ to:see him
 ‘I would like to see him.’

(b) *Én szeretné-lek* *lát-ni téged.*
 I would:like-S1SUBJ.2OBJ to:see you_SACC
 ‘I would like to see you_S.’

The problem is that the verb in the main clause – ‘would like’ – has a suffix selected by the direct object of the subordinate clause ‘you’ rather than by its own object, which would be the entire subordinate clause, as in (7)⁵.

(7) *Én szeretné-m,* *ha láthatnálak.*
 I would-like-S1SUBJ.3OBJ if I.could.see.you

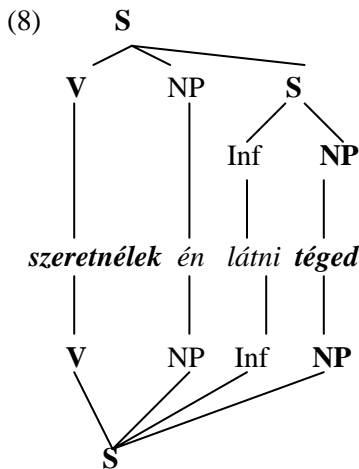
(6) is an exception since agreement in general is local: controller and target are clause-mates. Because of the type of agreement shown in (6), the supergeneralization according to which all agreement is local is lost and no subgeneralization is apparent holding for cases such as (6) where agreement is not local.

One might try to define the subclass of structures that exhibit this kind of long-distance agreement by the schema main verb + infinitive complement. If this definition were successful, the structures would form a regular, rather than exceptional, subclass since they would have a common denominator other than showing long-distance agreement. However, not all verb + infinitive constructions show this kind of agreement: transitive verbs (such as ‘want’ or ‘try’) and some intransitive ones (such as ‘strive’) do but other intransitive ones (e.g. ‘be ready’) do not (cf. É. Kiss 1987: 227-229; 2002: 203-205).

Exceptionality would be eliminated if we could analyze the entire sentences in (6) as a single clause because then agreement controller and agreement target would be clause-mates. There is indeed some evidence indicating the monoclausality of the sentence even apart from agreement. For example, if the subordinate object ‘you_S’ is to be focused it may occur in immediately pre-verbal position relative to the main verb. However, there is also evidence that this sentence is biclausal: the subordinate object ‘you_S’ may also be focused by being placed in front of the subordinate verb.

Thus, sentences like (6) are exceptional when considered as biclausal structures but regular when considered as monoclausal. Since there are arguments for both analyses, É. Kiss concludes as follows (1987: 237, 239; emphasis added): “It appears that the monoclausal and biclausal properties are equally weighty; neither can be ignored or explained away. What is more, they are **simultaneously** present; consequently, the biclausal structure and monoclausal structure that can be associated with [this construction] cannot represent two subsequent stages of the derivation, but must hold simultaneously...”

Here is a simplified version of the representation suggested by É. Kiss (1987: 238).

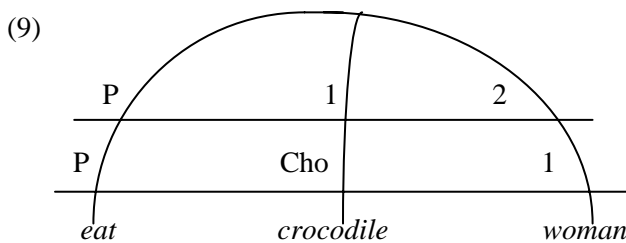


The sentence is shown as both exceptional and not exceptional depending on which face of the tree we consider. The top face represents the biclausal, exceptional structure: agreement controller and agreement target are in separate clauses. The bottom face in turn is monoclausal rendering the agreement configuration regular, with controller and target situated in the same clause. Thus, the supergeneralization according to which agreement is local is denied by the top half of the tree but it is saved with respect to the bottom half.

2.2. Two strata in a single representation

In É. Kiss's account, the exceptional and non-exceptional "personalities" of the construction are co-present at a single stage of the grammatical derivation. In other types of accounts, the regular and irregular facets of the construction are separated by derivational distance.

For an example, let us first consider the analysis of passives in Relational Grammar. In this framework, passive sentences are viewed as exceptional relative to actives. The example sentence skeletally represented in (9) is *The woman was eaten by the crocodile* (Blake 1990: 1-2). (P stands for predicate, 1 stands for subject, 2 stands for direct object, Cho ("chomeur") stands for the demoted subject: the *by*-phrase.)



The structural representation shows the sentence as having the passive structure on the final (lower) stratum but it has the active – i.e., regular – structure on the initial (upper) stratum. The passive structure is derived by a grammatical-relations-changing rule: advancement of the initial object and demotion of the initial subject.

The supergeneralizations that are lost due to the existence of passives are the alignment of the more active participant of a two-place predicate with the grammatical subject and the alignment of the less active participant with the object. There is also no subgeneralization that would render the alternative, passive-type alignment predictable. The label "passive" would not provide an

independent characterization of this subclass since it is simply a label for the exceptional structure. The Relational Grammar account restores the supergeneralization in that it holds for the initial stratum of passive sentence representations, although not for the final one.

The derivational distance between the irregular and regular facets of the sentence is more pronounced when they are represented as two separate tree structures. This will be illustrated next.

2.3. Separate representations in a single component

This approach to exceptions is familiar from various versions of Transformational Generative Grammar: exceptional structures are represented by two or more trees within the syntactic component of the grammar connected by transformational rules. We will look at two examples, one involving a movement rule, the other, raising.

The first example has to do with verb-object-particle order in English. Given the generalization that components of a lexical entry must be adjacent, and given that the verb and the particle – e.g. *wipe* and *off* – form a single lexical item, the prediction is that the verb will be immediately followed by the particle, as is the case in *Megan wiped off the table*.

However, this prediction is not always valid since *Megan wiped the table off* is also grammatical. The verb & object & particle order thus contradicts the supergeneralization about components of lexical items being adjacent and, in the absence of some condition under which the exceptional order occurs, there is no subgeneralization possible, either. The descriptor “particle verb” would not define the class independently of the deviant order since this label is based on the separability of the two elements.

In some versions of Transformational Grammar, sentences where verb and particle are not adjacent are shown as having the regular order on the underlying level with the particle directly following the verb, while the exceptional order is shown on the surface level (see for example Jacobs & Rosenbaum 1968: 100-106).

(10) underlying structure: *Megan wiped off the table*.

↓

surface structure: *Megan wiped the table off*.

Thus, the supergeneralization is restored with respect to the underlying structure, with exceptionality relegated to surface structure.

A second example of this approach to exceptions is the analysis of long-distance agreement in languages such as Imbabura Quechua proposed by Maria Polinsky (2003). This case is similar to the one seen in Hungarian: the verb of the main clause shows agreement with the object of the subordinate clause rather than with its own object, which would be the entire subordinate clause. (11) is an example (NMLS stands for ‘nominalizer’) (Polinsky 2003: 292).

(11) *Jose yacha-wa-n ñuca-ta maria-ta juya-j-ta.*
 Jose know-**S1OBJ-S3SUBJ me-ACC** Maria-ACC love-PRES.NMLS-ACC
 ‘Jose knows that I love Maria.’

Polinsky acknowledges that the controller is in the subordinate clause on an underlying level but argues that it is subsequently raised into the main clause. This means that controller and target end up in the same clause and thus the supergeneralization about the locality of agreement is preserved intact on the surface level although it is violated in underlying structure.

The anomaly that the grammatical operation of raising solves here is anomalous agreement. In addition, as is well-known, raising has also been adopted for resolving anomalous case marking.

In English sentences like *Mary believes him to have won the race*, the accusative case of *him* is problematic. First, it thwarts the supergeneralization according to which verbs assign case to their own arguments because this noun phrase is the semantic subject of *to have won* and not an argument of any kind of *believes*. Second, no general conditions are apparent under which this anomaly crops up and thus no subgeneralization is possible.

In Government and Binding theory, the exceptionality of such instances is explicitly acknowledged by the label “Exceptional Case Marking”, attributed to the exceptional nature of the main verbs that allow for this case assignment pattern (Chomsky 1984: 64-74, 98-101; Webelhuth 1995: 35-38). An alternative tack is taken in Paul Postal’s classic account of 1974, as well as in Howard Lasnik’s more recent proposal (Lasnik 1999): both opt for the raising analysis, whereby the main verb and the subordinate subject are in separate clauses on the underlying level but in the same clause in surface structure. Since surface structure legitimizes the assignment of the accusative by the main verb to the underlying lower subject that has been raised into the main clause, the supergeneralization regarding case marking is upheld in surface structure⁶.

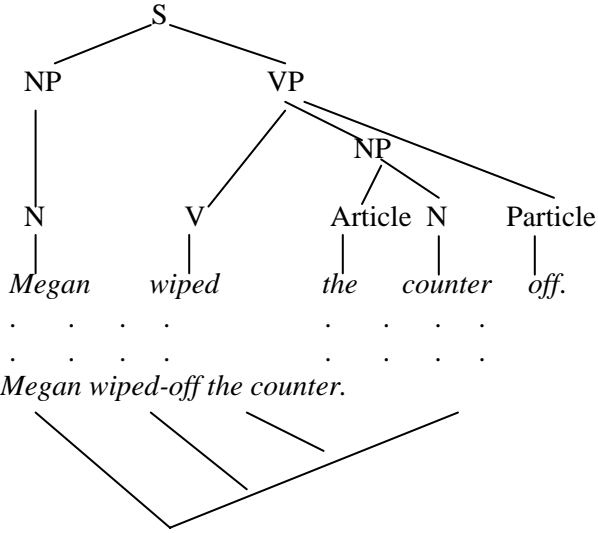
The distribution of regular and exceptional over underlying and surface structure is not the same in these accounts. In the analysis of passives in Relational Grammar and in the analysis of particle constructions, the exceptional structures are shown to be regular underlyingly and irregular on the surface, while in the case of long-distance agreement in Imbabura Quechua and of exceptional case marking in English, it is the opposite: the irregular structure is shown underlyingly and the derived structure – the result of raising – is regular. What is nonetheless common to all of these analyses is that there is a derivational split between two facets of the exceptional construction, only one of which is exceptional.

2.4. Separate representations in separate components

In the long-distance agreement pattern of Hungarian discussed above, the exceptional and regular patterns are simultaneously present: neither is derivationally prior to the other (see (8) above). In the account of English passives in Relational Grammar ((9) above) and in the accounts of English verb-particle order ((10), of long-distance agreement in Imbabura Quechua ((11)), and of exceptional case marking in English, out of the two representations – one regular, one exceptional - one derivationally precedes the other within the same component.

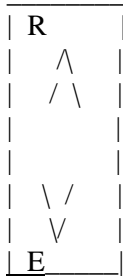
In yet another type of representation of exceptional structures, the “distance” between the exceptional and regular facets of the construction is widened. This is illustrated by Jerrold Sadock’s Autolexical Grammar analysis of particle order in English (Sadock 1987: 296-297; 2003). Here, the regular and irregular representations of an irregular structure are in different components with the two linked by non-directional lines of association. The verb & object & particle order is shown as exceptional in syntax but regular in semantics. Thus, the supergeneralization that lexical items are contiguous holds true in semantics and violated only in syntax. This is shown in (12).

(12)
SYNTAX:



Let us summarize the four basic ways of accommodating exceptional structures discussed in section 2. In the diagrams below, R stands for ‘regular’, E stands for ‘exceptional’.

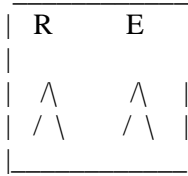
(13)
(a) two faces of a single representation



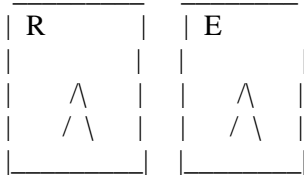
(b) two strata in a single representation



(c) separate representations in a single component



(d) separate representations in separate components



The four ways of splitting exceptional structures differ in the amount of independent support available for the two contradictory representations of the construction. If there is independent evidence for the existence of the two faces, strata, levels, or components that the structures are split into, the analysis is more convincing. Thus, Sadock's account, where discontinuous particle structures are regular in their meanings but irregular in their forms, rests on the firmest ground: the basis of the split is meaning versus syntactic form – a dichotomy that is widely supported and the mismatches between the two multiply evidenced. Different levels in the same component and different strata in a single tree may or may not be justified depending on the amount of independent evidence for the existence of the levels and strata. The most conflicted representation is the bifacial tree – although, given the facts and the framework assumed, it seems indeed fully unavoidable.

3. Regularizing exceptions

The analyses we have surveyed so far go half-way towards eliminating exceptionality: they represent exceptional structures as exceptional in part of the account but regular in another part. An alternative approach taken in the literature is re-analyzing exceptions as fully regular.

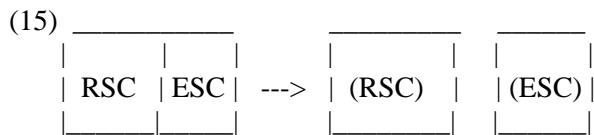
As noted in section 1.2, there are two problems with exceptions. First, they split the superclass and thus disable a general rule that would hold for that class. Second, since the regular and exceptional subclasses are not otherwise identifiable, no sub-generalization is possible either. It follows then that exceptions may be regularized in two ways: either by restoring the homogeneity of the superclass by abolishing the subclasses (since in that case, the supergeneralization can be maintained); or, somewhat paradoxically, by strengthening the subclasses through identifying a correlating property which renders subgeneralizations possible. In other words, one tack is to show that the regular and irregular distinction does not exist: there are no subclasses within the class; the other is to acknowledge that there are indeed subclasses and showing that they are all robust. We will now see examples of both kinds of solution.

3.1. Restoring the superclass

There are two ways of eliminating subclasses within a superclass. One is by reanalyzing the subclasses so that there is no difference between them, after all. The general schema is shown in (14). RSC stands for the regular subclass, ESC stands for the exceptional one.



The other way of eliminating subclasses amounts to deepening the difference between the regular and exceptional cases so that the exceptional cases fall outside the superclass. This is diagrammed in (15).



Let us see examples of each approach.

A. Restoring the superclass by unifying the subclasses

English verb-particle constructions once again offer an example. Their transformational analysis was described above; here is an alternative account. Pauline Jacobson proposes that the single rule – the direct object immediately follows the verb – holds both for the regular and the seemingly exceptional cases (Jacobson 1987: 32-39). This is made possible by assuming that the lexicon lists both *call* and *call up* as verbs. The seemingly exceptional order *call Sue up* is therefore not exceptional since it obeys the same rule as the regular order *call up Sue*: in both cases, the direct object immediately follows the verb.

Other examples of resolving exceptions by showing them to be regular come from long-distance agreement. In her paper of 2003 cited above, Maria Polinsky surveys several languages where the same exceptional pattern crops up: the main verb agreeing with an argument of the subordinate clause. Her proposed solutions fall into three types. For Imbabura Quechua - as was discussed above (see (11)) – she proposes a raising analysis which puts the agreement controller from the subordinate clause into the main clause and thus halfway regularizes the construction.

For the other two kinds of long-distance agreement (in Algonquian languages and in Tsez, respectively) she proposes two avenues of full regularization. (16) and (17) present examples of the two patterns (Polinsky 2003: 285, 303).

(16) Blackfoot (glossing is simplified)
nit-wikixtatwaa-wa n-oxko-wa m-áxk-a'po'takixsi
 1SUBJ-want-3OBJ my-son-3 3SUBJ-might-work
 'I want my son to work.'

(17) Tsez (A stands for a long /a/; II indicates Class II)
 užir y-iyx kidbA **kayət** t'At'ruli
 boy II-knows girl letter.II.ABS read
 'The boy knows that the girl has read the letter.'

For Blackfoot and other Algonquian languages, Polinsky proposes that the controller in the subordinate clause has a “proxy” in the main clause and cites independent evidence. The main verb thus agrees with this proxy – a clause-mate. This analysis merges the exceptional cases into

the regular class so that the supergeneralization about the class-mate-hood of controller and target stands unimpaired.

For Tsez, she suggests that the very domain of agreement be re-defined: rather than controller and target having to be clause-mates, both have to occur in the domain of head-government. This amounts to formulating a new, broader generalization into which both regular and irregular cases fit with their difference wiped out.

Both solutions amount to eliminating the boundary between the regular and exceptional subclasses.

B. Restoring the superclass by exempting the exceptions

The examples above showed two ways in which the boundary between regular and exceptional subclasses can be eliminated: either by reanalyzing the exceptions, as Jacobson does for verb-particle constructions and Polinsky for the Algonquian-type long-distance agreement, or by reformulating the supergeneralization, as Polinsky does for Tsez. As noted in the beginning of this section, the unity of the superclass can also be restored by more dramatically re-analyzing the exceptions so that they do not even belong to the superclass.

An example is Ivan Sag's analysis of English verb-particle constructions (Sag 1987: 329-333). In Sag's analysis, when the particle is separated from the verb, it is not a particle but a prepositional phrase. For instance, in the sentence *Megan wiped off the table*, *off* is a particle but in *Megan wiped the table off*, *off* is a prepositional phrase. Thus, this *off* is simply not beholden to the generalization according to which lexical items – such as *wipe off* – have to be continuous since it does not form a single lexeme with *wipe*.

Another proposal that resolves exceptionality by removing the apparent exception from the superclass within which it might be seen as exceptional is by Peter Cole and Gabriella Hermon (Cole and Hermon 1998). The problematic structure is long-distance reflexives in Singapore Malay: as shown in (18), the pronoun *diri-nya* can take either a local or a long-distance antecedent (Cole and Hermon 1998: 61; Ahmad is male, Salmah is female.)

(18)

Ahmad tahu**y** **Salmah** akan membeli baju untuk **diri-nya**.

Ahmad know **Salmah** will buy clothes for **self-S3**

'Ahmad knows Salmah will buy clothes **for him**.'

OR

'Ahmad knows Salmah will buy clothes **for herself**.'

The word *diri-nya* is a crosslinguistic anomaly both in its internal structure and in its distribution: it does not exhibit the usual characteristics of long-distance reflexives in other languages (such as Mandarin). Two of the generalizations that it is an exception to are that long-distance reflexives are monomorphemic and that they require a subject antecedent.

Cole and Hermon propose that *diri-nya*'s properties deviate from long-distance reflexives in other languages not because it is an exceptional long-distance reflexive but because it is not a long-distance reflexive at all: instead, it is a structure indeterminate between a reflexive and a pronoun. They offer various bits of evidence in support of the proposal that will not be reproduced; what is important here is the type of argument employed to deal with the exception. As in Sag's analysis of discontinuous verb-particle constructions, the offending exception is lifted out of the superclass and thus freed of the obligation to conform.

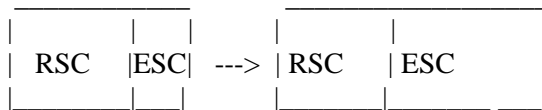
As noted in the beginning of section 3, there are two basic ways of regularizing exceptions. One is by **eliminating the regular-exceptional distinction within the superclass and thus restoring the supergeneralization**. The other is by **strengthening the subclasses and thus making subgeneralizations possible**. So far we have seen examples of the first approach; we will now turn to examples of the second.

3.2. Strengthening the subclasses

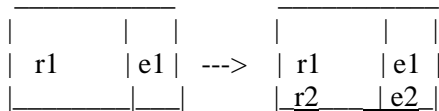
As discussed in section 1.2, exceptions form a subclass that is both small and undefined. Thus, strengthening the subclass of exceptions may be achieved in two ways. First, exceptions may be strengthened **quantitatively**. If the number of exceptions can be shown to be larger than first thought, it is more likely that the exceptions are principled rather than chance phenomena. Second, the exceptional subclass may be strengthened **qualitatively** if additional characteristics can be identified other than the one on which the regular-irregular distinction rides: correlating properties that render the exceptions predictable. (19) diagrams the two approaches; r1 and r2 stand for properties of the regular subclass and e1 and e2 are properties of the exceptional subclass.

(19) Strengthening the exceptional subclass...

(a) ...quantitatively



(b) ...qualitatively



A recent study that **quantitatively** strengthens a crosslinguistically exceptional subclass is Rachel Nordlinger and Louisa Sadler's article of nominal tense (2004). It has been generally assumed that nouns are time-stable entities and therefore tensed nouns are exceptional across languages. Nordlinger and Sadler, however, marshal evidence for tensed nouns from ten languages, some of them areally and genetically distant (e.g. Hixkaryana, Potawatami, and Somali). The fact that tensed nouns are more frequent than generally believed makes it likely that their occurrence is not just a freak accident: there may be a structural condition to predict their existence.

Let us now turn to proposals that shore up exceptional subclasses **qualitatively**. For the first example, we will return once more to English verb-particle constructions.

In her book on English verb-particle constructions, Nicole Dehé (2002) assumes a transformational account whereby the contiguous verb-particle construction is underlying and the disjoint structure is derived. The additional step that she takes is probing into the conditions under which the discontinuous construction is used. She finds that this exceptional structure does have an information-theoretical correlate (103-207, 279-283). In particular, a noun-headed object follows the particle if the object is part of the focus of the sentence. If, however, the object is known to the speaker and hearer and the focus is on the complex verb, the object intervenes between the verb and the particle. Thus, *Andrew handed out the papers to the students* is used if *the papers* is new information and *Andrew handed the papers out to the students* is used if *the papers* is topical.

According to this account, the two order patterns of the English verb-particle construction do not form arbitrary subclasses. Their dichotomy is maintained but since an information-structural correlate has been identified for each class, the order patterns are predictable rather than random.⁷

Proposing correlations for exceptions and thus showing that they are regular is a focus of several papers in this volume. As already mentioned above, J. Jónsson and Th. Eythórsson

propose that the apparently exceptional Icelandic verbs that take accusative subjects form a syntactically and semantically coherent class; Th. Wasow, F. Jaeger, and D. Orr’s study reveals that the exceptional omission of the conjunction *that* in English relative clauses is correlated with the predictability of the conjunction in those structures; and M. Cysouw and G. Corbett describe clusterings of exceptional properties in and across languages.

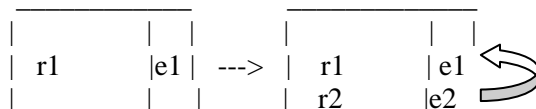
Finding correlates to structures that are crosslinguistically exceptional is the central goal of language typology. A recent study that exemplifies this endeavor with respect to crosslinguistic exceptions is Masayuki Onishi’s (2001). Onishi’s concern is with non-canonical case marking – i.e., patterns that depart from the normal case marking of intransitive subjects, transitive subjects, and direct objects in a language. He finds that non-canonical case marking is not random across languages: it correlates with certain semantico-syntactic predicate types; for example stative verbs expressing physiological states and events or psychological experiences such as ‘enjoy’, ‘be happy’, and ‘be pleased’.

4. Explaining exceptions

In the preceding two sections, we have seen two basic ways in which exceptions can be dealt with: representing them as **both exceptional and regular**; and reanalyzing them as **fully regular**. A third alternative of dealing with exceptions is accepting them as fully - or partially - exceptional and finding reasons why they are so; i.e., **explaining them**.

This is an extension of identifying correlating properties since such properties are required for explaining exceptions. They are, however, not quite sufficient: for a maximally convincing explanation, there has to be a causal relation between a correlating property and the exceptional feature. The basic idea is diagrammed in (20), where r1 and e1 are the properties in terms of which the exceptional subclass is exceptional and, as before, r2 and e2 are the correlating properties. The arrow stands for explanatory deduction.

(20) Explaining exceptions



The studies by J. Jónsson and Th. Eythórsson on Iceland accusative objects and by Th. Wasow, T. Jaeger, and D. Orr on English relative clauses mentioned above are explanatory if we take meaning and processing ease to be explanations of form. An example from outside this volume is Langacker’s account of raising structures that were discussed in section 2.3. Rather than an arbitrary exception within the class of subordinate constructions, he recognizes this type of construction as an instance of a widespread structural pattern in language.

The analysis is based on an observation made by Relational Grammarians under the label Relational Succession Law. What it says is that a noun phrase raised into the main clause inherits the grammatical role of the clause that it is raised from (cf. Blake 1990: 94). Thus, noun phrases that come from subject clauses are raised to subject (as *Fred* in *Fred seems to be happy*, derived from *[[Fred is happy]_S seems]_S) and if they come from an object clause, they are raised to object – as *the computer* in *Fred believes the computer to have been delivered*, derived from *[Fred believes [that the computer has been delivered]_S]_S.**

Langacker goes a step further by showing that raising structures are an instance of “part-proto” constructions: a part stands for the whole, as in *Give me a hand*, where *hand* stands for manual assistance by a person, or *So you got new wheels*, where *wheels* stands for a car. Given the generalization that the whole may be represented either by the whole itself or by a part, both

raised and unraised constructions are brought under a single generalization and are explained as both regular instances of a very general, independently attested pattern.

However, synchronic observations cannot provide direct causes for language structure; they act only indirectly on language processing, language acquisition, and ultimately on historical change. D. Nübling's paper in this volume proposes to explain the morphological irregularity of four German verbs by tracing their historical origins and relating them to well-known pathways of change.

But even diachronic explanations cannot do more than render exceptionality possible or perhaps probable but not necessary. To see this, let us return to the two examples given in the beginning of this paper. The historical background of English nouns with /ɔn/ plural (see (1)) is that they were weak nouns in Old English and for weak nouns, /ɔn/ was the regular plural. But this fact does not predict that this suffix should have been retained by any noun at all and even less that it should have been retained by the three nouns where it occurs today.

Similarly, languages that have no nasal consonant phonemes (see (3)) are said to have had them at some point in their history before the nasals turned into voiced oral consonants (Hockett 1955: 119). But the availability of such a process does not predict that it should actually have happened in any language at all and even less that it should have happened in those particular languages where it has.⁸

5. Conclusions

In this paper, exceptions were characterized as posing a conflict in categorization. All instances of subclassification disrupt the homogeneity of a class; but if the subclasses are characterized by clusters of properties, they can be described in terms of subgeneralizations. Exceptions, however, form a rogue subclass that is both quantitatively and qualitatively lean and thus not subsumable under a subgeneralization.

Various ways of coming to grips with exceptions were surveyed; here is a summary of the approaches discussed above.

- (A) Representing exceptions as both exceptional and regular by means of
 - (a) two faces of a single representation, or
 - (b) two strata in a single representation, or
 - (c) separate representations in a single component,
or
 - (d) separate representation in separate components

- (B) Regularizing exceptions by
 - (a) restoring the homogeneity of the superclass
 - by unifying the regular and exceptional subclasses,
-- through re-analyzing the exceptions as regular, or
-- through positing a new, more comprehensive superclass within which both the
erstwhile regular and erstwhile exceptional cases turn out to be regular; or
 - by assigning the exceptions to a different superclass;
or by
 - (b) strengthening the exceptional subclass
 - quantitatively, and/or
 - qualitatively

- (C) Explaining why the exceptions are exceptional

While we have seen that solutions to exceptions vary with the theoretical framework, it is important to recognize that the very status of a grammatical pattern: whether it is or is not exceptional to begin with, is also highly theory-dependent (Plank 1981: 4-7). The most fundamental variable across different approaches is whether the empirical domain in question is assumed to be well-regulated so that generalizations are to be expected to hold exceptionless; or whether the domain is seen as a less tidy sort without tight rules. If structural patterns are assumed to be mere probabilistic tendencies, what would otherwise count as exceptions will be “automatically anticipated” (Hempel 1988: 152). If there is no strict regularity, there cannot be irregularity, either.

The four last papers in this volume propose to change the theoretical assumptions in the light of which certain phenomena are exceptional. R. Vogel’s paper about alternative case assignment to relative pronouns in German free relatives argues that none of the alternatives is the norm; instead, variation itself is the norm in the grammar of German resulting from the conflicting desiderata that case assignment needs to satisfy. Somewhat in the same vein, F. Fouvry suggests that grammatical rules be relaxed to operate probabilistically so that exceptions are still rule-governed.

F. Newmeyer similarly calls into question the very concept of regularity within the superclass that exceptional phenomena are generally assumed to belong to. He suggests that typological correlations in syntax are performance-based rather than stemming from principles of linguistic competence. Given that the domain of performance is less constrained overall, there is no reason to expect typological generalizations to be free of exceptions. The competence-performance distinction is also central to S. Featherston’s paper. He proposes that if well-formedness is allowed to be gradient, rather than binary, grammars have no exceptions. Exceptions are in turn the result of output selection by the speaker – a function of language processing.

These proposals are akin to the way of dealing with exceptions that we saw above: separating them out of the superclass within which they would appear to be exceptions (e.g. Sag’s analyzing particles that are separated from the verb not as irregularly placed particles but as regularly ordered prepositional phrases). The difference is that in these accounts, not individual exceptions but entire classes of exceptions are lifted out of the broader domain of strictly regulated phenomena.

In sum: no grammatical construction is exceptional all by itself but only if considered in comparison with other similar constructions; and only if the theoretical framework of the analysis would expect it to be regular.⁸

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NOTES

1/ A large inventory of lexical exceptions in English is cited and their exceptionality relative to transformational rules discussed in Lakoff 1970: 14-21, 30-43 et passim.

2/ For a rich collection of crosslinguistically rare grammatical constructions, see the *Grammatisches Raritätenkabinett* at <http://lang.uni-konstanz.de/pages/proj/sprachbau.htm> On the inherent difficulties of establishing a grammatical structure as crosslinguistically rare, see Cysouw 2005.

- 3/ Regarding crosslinguistic exceptionality, compare Haiman 1974: 341: “If a word exhibits polysemy in one language, one may be inclined, or forced, to dismiss its various meanings as coincidental; if a corresponding word in another language exhibits the same, or closely parallel polysemy, it becomes an extremely interesting coincidence; if it displays the same polysemy in four, five, or seven genetically unrelated languages, by statistical law it ceases to be a coincidence at all.”
- 4/ Note that the class of languages that have no nasal consonant phonemes is not defined either by genetic or by areal relationship: while Quileute (Chimaukan) and the Salish languages: Puget Sound, Duwamish, and Snoqualmie, are geographically close, Mira is spoken in Brazil and Rotokas in New Guinea. For some Niger-Congo languages without nasal consonant phonemes, see Bole-Richard 1985.
- 5/ The verb-agreement pattern in Hungarian is actually more complex than shown by these examples but the details are not relevant here.
- 6/ For discussion, see Newmeyer 2003: 157-160.
- 7/ For several alternative accounts of verb-particle construction in English and other languages, see Dehé et al. (ed.) 2002.
- 8/ Exceptions, also known as irregularities, anomalies, or simply counterexamples to generalizations, loom large in all sciences both social and natural. For relevant discussions in the philosophical literature about *ceteris paribus* generalizations, see Cartwright 1988a, 1988b, Hempel 1988, Darden 1992, and Carroll (no date). Whether this paper might contribute to a general account of how exceptions are dealt with across sciences remains to be seen.

REFERENCES

- Blake, Barry J.
1990 *Relational Grammar*. London and New York: Routledge.
- Bole-Richard, Rémy.
1985 Hypothèse sur la genèse de la nasalité en Niger-Congo. *Journal of West African Languages* 15, 2: 3-28.
- Carroll, John.
No date Laws of nature. <http://plato.stanford.edu/entries/laws-of-nature>
- Cartwright, Nancy
1988a Truth does not explain much. In Cartwright 1988c, 44-53.
- Cartwright, Nancy
1988b Do the laws of physics state the facts? In Cartwright 1988c, 54-73.
- Cartwright, Nancy
1988c *How the Laws of Physics Lie*. Oxford: Clarendon Press.
- Chomsky, Noam
1984 *Lectures on Government and Binding. The Pisa lectures*. Dordrecht: Foris.
- Clahsen, Harald, Monika Rothweiler, and Andras Woest
1992 Regular and irregular inflection in the acquisition of German noun plurals. *Cognition* 45: 225-255.
- Cole, Peter, and Gabriella Hermon
1998 Long distance reflexives in Singapore Malay: an apparent typological anomaly. *Linguistic*

Typology 2-1, 57-77.

Cysouw, Michael

- 2005 What it means to be rare: the variability of person marking. In Zygmunt Frajzyngier, Adam Hodges, and David S. Rood (ed.), *Linguistic Diversity and Language Theories*. 235-258. Amsterdam/Philadelphia: Benjamins.

Darden, Lindley

- 1992 Strategies for anomaly resolution. In Ronald N. Giere (ed.), *Cognitive Models of Science*. 251-273. Minneapolis: University of Minnesota Press.

Dehé, Nicole

- 2002 *Particle Verbs in English. Syntax, Information Structure and Intonation*. Amsterdam/Atlanta: Benjamins.

Dehé, Nicole, Ray Jackendoff, and Andrew McIntyre & Silke Urban (ed.)

- 2002 *Verb-particle Explorations*. Berlin, New York: Mouton de Gruyter.

É. Kiss, Katalin

- 1987 *Configurationality in Hungarian*. Budapest: Akadémiai Kiadó.

É. Kiss, Katalin

- 2002 *The Syntax of Hungarian*. Cambridge: Cambridge University Press.

Francis, Elaine J. & Laura A. Michaelis (ed.)

- 2003 *Mismatch. Form-function Incongruity and the Architecture of Grammar*. Stanford, CA: Center for the Study of Language and Information.

Haiman, John.

- 1974 Concessives, conditionals, and verbs of volition. *Foundations of Language* 11: 341-359.

Hempel, Carl

- 1988 Provisoes: a problem concerning the inferential function of scientific theories. *Erkenntnis* 28: 147-164.

Hockett, Charles

- 1955 *Manual of Phonology*. Baltimore, MD: Indiana University Publications in Anthropological Linguistics, Memoir 11.

Huck, Geoffrey, and Almerindo E. Ojeda (ed.)

- 1987 *Discontinuous Constituency*. [Syntax and Semantics, #20] Orlando, FL: Academic Press.

Jacobs, Roderick A., and Peter S. Rosenbaum

- 1968 *English Transformational Grammar*. Waltham, MA: Blaisdell.

Jacobson, Pauline

- 1987 Phrase structure, grammatical relations, and discontinuous constituents. In Huck and Ojeda (ed.) 27-69.

Lakoff, George

- 1970 *Irregularity in Syntax*. New York, Chicago: Holt, Rinehart and Winston, Inc.

Langacker, Ronald W.

- 1995 Raising and transparency. *Language* 71, 1: 1-62.

Lasnik, Howard.

- 1999 *Minimalist Analysis*. Malden, MA, Oxford: Blackwell's.
- Newmeyer, Frederick J.
 2003 Theoretical implications of grammatical category – grammatical relation mismatches. In Francis, and Michaelis (ed.), 149-178.
- Nordlinger, Rachel and Louisa Sadler
 2004 Nominal tense in crosslinguistic perspective. *Language* 80, 4: 776-806.
- Onishi, Masayuki
 2001 Non-canonically marked subjects and objects: parameters and properties. In Alexandra Y. Aikhenvald, and R.M.W. Dixon & Masayuki Onishi (ed.) *Non- canonical Marking of Subjects and Objects*. 1-51. Amsterdam/Philadelphia: Benjamins.
- Plank, Frans
 1981 *Morphologische (Ir-)Regularitäten. Aspekte der Wortstrukturtheorie*. Tübingen: Gunter Narr.
- Polinsky, Maria.
 2003 Non-canonical agreement is canonical. *Transactions of the Philological Society*, 101,2: 279-312.
- Postal, Paul M.
 1974 *On Raising. One rule of English and Its Theoretical Implications*. Cambridge and London: The MIT Press.
- Sadock, Jerrold M.
 1987 Discontinuity in autolexical and autosemantic syntax. In Huck and Ojeda (ed.), 283-301,
- Sadock, Jerrold M.
 2003 Mismatches in autonomous modular versus derivational grammar. In Francis & Michaelis (ed.), 333-353.
- Sag, Ivan A.
 1987 Grammatical hierarchy and linear precedence. In Huck and Ojeda (ed.) 283-301.
- Webelhuth, Gert
 1995 *Government and Binding Theory and the Minimalist Program*. Oxford and Cambridge: Blackwell.