Karlík a továrna na lingvistiku

Prof. Petru Karlíkovi
k šedesátým narozeninám

Aleš Bičan
Jan Klaška
Petra Macurová
Jana Zmrzlíková
(editoři)
Recenzovali: doc. PhDr. Zdeňka Hladká, Dr., Mgr. Pavel Kosek, Ph.D.

Editors © Aleš Bičan, Jan Klaška, Petra Macurová, Jana Zmrzlíková, 2010
© Host — vydavatelství s. r. o., 2010
© Masarykova univerzita, 2010

Obsah

Úvod ................................................................................................................................. 9
Marie Krčmová / Petr Karlík známý a neznámý ......................................................... 12
Zdeňka Hladká / Ohlédnutí za konferencemi Čeština – univerzála a specifika ................................................................. 20
Antonín Bartoněk / Deontická a epistémická modalita v latině a řečtině. Třicet pět let výzkumné práce na Masarykově univerzitě ................................................................. 29
Daša Bartoňková / Prosimetrum, the Mixed Style, in Fulgentius’ Mythologies ................................................................. 40
Aleš Bičan / Čím je Petr zvláštní aneb kombinovatelnost slabičného /ř/ v češtině ................................................................. 49
Václav Blažek / Kolik slov používali Indoevropané? ................................................. 69
Michaela Čornejová / Karel v toponymii Moravy a Slezska ............................... 90
Joseph Emonds / Case Theory Revisited: Nominative and Accusative Super Case ................................................................. 98
François Esvan / Poznámky k adaptaci sloves cizího původu v češtině ................................................................. 125
Masako Fidler / Onomatopoeia as an Embryonic Word: Sound and Submorphemic Properties of Czech Onomatopoeic Expressions ................................................................. 138
Eva Hajjičová / Tři otázky pro Petra Karlíka (a tři oříšky pro Popelku) ................................................................. 156
Björn Hansen / Another Piece of the Infinitive Puzzle: the Czech Frustrative Construction ne a ne zapršet ........................................... 166
Milada Hirschová / Tzv. primární ilokuce, větný modus a kondicionál ................................................................. 180
6

Tomáš Hoskovec / Věta a výpověď ve znakovém pojetí jazyka ................................................................. 190
Jan Kořenský / Věčný spor – slovník vs. gramatika ještě jednou ........................................................................ 200
Pavel Kosek / Slovosled kondicionálového auxiliáru v Bibli svatováclavské ........................................................ 205
Peter Kosta / Causatives and Anti-Causatives, Unaccusatives and Unergatives: Or How Big is the Contribution of the Lexicon to Syntax .......................................................... 230
Michal Kříštěk / Stylovotvorné faktory v (inter)akci: gratulace formou stručného komentáře k jubilantovu individuálnímu stylu ................................................................. 274
Krzysztof Migdalski / The Third Person Auxiliary Clitic as a Number Marker in Slavic ........................................... 277
Eva Minářová / Variabilita a dynamika lexikálních prostředků publicistiky .............................................................. 293
Marek Nekula / Deminutiva a augmentativa v češtině z typologického hlediska ...................................................... 304
Klára Osolsobě / Několik poznámek na okraj derivací od sloves s uzavřeným kmenem minulým .............................. 316
Karel Pala – Pavel Šmerk / Multiword Expressions in Czech (a Case Study) ............................................................ 331
Jarmila Panevová / „Být posel dobrých zpráv je mi příjemné“ (Několik poznámek k infinitivním konstrukcím) .................. 345
Anna-Maria Perissutti / Analytické kauzativní konstrukce v češtině ................................................................. 355
Vladimír Petkevič / Využití vidu ke zkvalitnění automatického zpracování češtiny ................................................................. 368
Jana Pleskalová / Petr a Karlik v průběhu 12.–21. století na území dnešní České republiky .............................................. 388
Zdenka Rusínová / Psané slovo mezi světem digitálním a analogovým ........................................................................ 394
Dušan Šlosar / Záporný imperativ redivivus ............................................... 402
František Šticha / K jednomu typu číselné (ne)kongruence (na bázi ČNK) ................................................................. 406
Jindřich Toman / On -t’, of All Things ........................................... 428
Radoslav Večerka / Poznámka k syntaktické terminologii .......... 436
Jarmila Vojtová / K nářeční terminologii pěstování vína ........ 441
Roland Wagner / Nenahýbejte se z oken – úvahy na cestě z Brna do Norimberku .............................................................. 450
Stanislav Žaža / K funkcím akuzativu v antických jazycích a ve staré ruštině ....................................................................... 468
Soupis prací Petra Karlíka ............................................................. 481
Causatives and Anti-Causatives, Unaccusatives and Unergatives: Or How Big is the Contribution of the Lexicon to Syntax

Peter Kosta
University of Potsdam, Germany
peter.kosta@uni-potsdam.de

1 Introduction and overview over the types of Causative Construction (CC) in various languages of the world

During the last 40 years research of causativity belonged to the central themes of the general and comparative or better typological linguistics. In this respect it is astonishing that in my opinion from the Slavic side this subject was treated if at all very marginally in the past. My interest was motivated by the fact that CC requires an analysis, which touches an interface of morphology, semantics, lexicon and syntax. Therefore it is also easy to grasp by the Minimalistic Program (with the inclusion of Distributive Morphology). Furthermore, the theme comprises important observations concerning questions of diathesis and passive which motivated me to choose it for the present volume.

In this article the features of externally and internally caused verbs will be described and put into context of the phenomenon of unaccusativity. My approach will be the following: I will try to characterize the relationship between lexicon and syntax, namely including the concepts of Distributive Morphology and of ROOT-Semantics of verbs, which participate or rather, do not participate in Causative Alternation and unaccusativity.

The Causative Alternation (CAL) will serve as criteria to distinguish between externally and internally caused causation; with help of the CAL the unaccusative Verbs will be divided into two subgroups: alternating unaccusative (AU-) verbs and non-alternating unaccusative (NAU-) verbs. In the following an alternate distinction
between AU- and NAU-verbs will be developed, namely the presence/absence of information about *how the process to be treated was caused*.

The universal concept of the encyclopedic lexicon in the English, German and Czech language seems to assume four different ROOTS of verbs at base to classify the Anti-Causativity-Opposition: \(\sqrt{\text{agentive}}\) (*murder, assassinate, cut*), \(\sqrt{\text{internally caused}}\) (*blossom, wilt, grow*), \(\sqrt{\text{externally caused}}\) (*destroy, kill, slay*) and \(\sqrt{\text{cause unspecified}}\) (*break, open, melt*).

Moreover, it will be shown that unergative/causative pairs depict an independent phenomenon which does not affect considerations about CAL (correspondent to Alexiadou et al. 2006a, b and Marantz 1997, but dissenting Levin – Rappaport Hovav 1995 and Reinhart 2000). In 6 and 7 I will provide an exact analysis of the roots (ROOTS) and the syntactic projections which derive from them.

2 General syntactic, morphologic and semantic characteristics of CC

Causative Constructions (hereafter CC) are grammatical expressions, describing a complex situation which consists of two components (Song 2001: 256–259): (i) the causing event (CAUSER-EVENT), where the CAUSER initiates or causes something and (ii) the caused event (CAUSEE-EVENT/STATE), where the CAUSEE is doing an action or is subject to a change of state, as a result of the initiated or caused action of the CAUSER. The following Japanese sentence describes such a situation of causativation:

(1) Japanese

\[
\text{Kanako ga Ziroo o ik- ase -ta.} \\
\text{Kanako NOM Ziro ACC go-CAUS-PST} \\
\text{“Kanako made Ziro go.”}
\]

In example (1) the CAUSER (*Kanako*) is the cause that induces the CAUSEE (*Ziro*) to do the action of walking. In the case of Japanese we talk about a so-called non-periphrastic construction. A distinction is made between non-periphrastic and periphrastic (analytical) CC. The non-periphrastic CC can be realized in one sentence (monoclausal)
by the morphologic procedure of affixation or composition; the periphrastic CC can be realized in two different clauses by two different verbs, the basis or causative verb and the main verb.

1.1 Non-periphrastic CC

Non-periphrastic CC are causative expressions with the following three characteristics: Firstly, the expression of the action initiated by the causer (i.e. -ase in [1]) and the expression of the effect (i.e. ik- in [1]) must be comprised in the same predicate. It can consist of two or more verbs (i.e. ik-ase in [1] or two verbs me and ñò in example [6] below). In other words, in non-periphrastic CC CAUSER (causative verb) and CAUSEE (effect verb) must be contained within one and the same clause. Secondly, the nominative phrase (NP) of the CAUSER must take a grammatically more prominent position (i.e. subject in [1]) than the NP of the CAUSEE (object in [1]). Thirdly, the expression of the CAUSER’s action – whether realized as an affix or as a separate verb – may not contain a specifically lexical meaning. In (1) the suffix -ase has no lexical meaning as distinct from the verb ik- “go”. The affix -ase has a purely grammatical meaning of causation. Therefore the periphrastic CC will be left unconsidered in this class of non-periphrastic CC. Like the Papua language Manam (Papua, New Guinea), the action of the CAUSER and the action of the effect can be expressed biclausally with two different predicates, i.e. they are treated as predicates of two different clauses.

(2) Manam (Lichtenberk 1983: 447)
Wása ñùsi i-ema?-i-be i-moa?ùsu.
wind cloth 3SG real-cause-3SG obj-and 3SG real-move
“The wind made the loin cloth move.”

In addition to the three conditions of the definition of non-periphrastic CC there is the overt marking of the CAUSER element and of the CAUSEE element (effect). The case of Tuvaluan (Polynesia), therefore, cannot be considered a CC, because the action caused by a CAUSER is not marked overtly by a predicate or affix, while the one of the effect is:
In general two subtypes of non-periphrastic CC are distinguished: 1) the morphologic and 2) the composed type.

1) The morphologic type refers to the main verb + causative affix. This includes example (1) of the Japanese causative suffix \(-ase\), which is affixed to the causative main verb (cf. Song 1996: 21–26). The anti-causative shows a zero-affix morpheme, cf. (4):

(4) Japanese

\[
\begin{align*}
\text{Ziroo ga ik-u.}  \\
\text{Ziro NOM go-PRES}  \\
\text{“Ziro goes.”}
\end{align*}
\]

It is vital for our analysis to stress the circumstance that causative elements can occur not only as suffix, but also as prefix, as in Abkhazian, or as infix, as in Lepcha, or as circumfix, as in Georgian (cf. Song 1996: 21–28). Furthermore, the morphologic processes can involve vocalic or consonantal introflexions, as in Lahu \(dɔ̀\) “drink” vs. \(tɔ\) “give” (i.e. “cause to drink”), reduplication of the main verb’s consonant (cf. Egyptian Arabic \(mawat\) “die” vs. \(mawwit\) “kill”), internal vocal stretching (cf. Kashmiri \(marun\) “die” vs. \(mərən\) “kill”), reduplication of the main verb (cf. Korana \(xa\) “learn” vs. \(xa-xa\) “teach”) and even change of pitch (cf. Lahu \(cā\) “eat” vs. \(cā\) “feed”).

The Slavic languages, represented here by Russian, depict a different version of the morphological type according to Comrie. In the Russian language it is often the non-causative (anti-causative) form of the verb which contains an additional morpheme, namely the anti-causative suffix \(-sja\), corresponding to the Czech free unbound anti-causative clitic reflexive pronoun \(se\) (cf. Russian \(lomatsja / lāmat se\) “to break”). For the purpose of a coherent typological treatment we will treat the Russian and Czech causative verbs of the mentioned type also as an entity of the morphological type for the moment.

In comparison to anti-causative verbs we could assume a causative zero-morpheme for the causative verbs. Globally, the morphological
type of the non-periphrastical causative construction constitutes a rather small group (cf. Lahu, Egyptian Arabic, Kashmiri, Korana, Russian, Czech, et al.).

2) With the composed type the action of the CAUSER is expressed by a single separate verb instead of a morpheme. However, the causative verb must be adjacent to the main verb, in order that no further elements are to be found between them. Thus, both verbs (the causative and the lexical verb) are regarded as a single predicate (i.e. as verbal compound), similar to type 1 where the causative suffix and the main verb form a single predicate. The Romance languages French, Spanish and Italian belong to the languages of the second, composed type. In French both verbs (except for few lexical elements e.g. the clitics, several adverbs and the negation pas) must be adjacent, in order that the CAUSEE-NP (and the object-NP of the main verb) cannot be split, as demonstrated in (5):

(5) French

*Je le lui ferai lire.*

I it<sub>ACC</sub> her<sub>DAT</sub> make<sub>FUT</sub> read

“I’ll make her read it.”

In the Tibeto-Burman language, the Eastern Kaya Li (Myanmar) the verb of cause [VCaus] and the verb of effect [Veffect] must be in immediate adjacency. The NP of the CAUSER (?a) and the NP of the CAUSEE (phúcè) appear before and after the sequence of both verbs:

(6) Eastern Kaya Li (Solnit 1997: 69)

*ʔa me ḋò phúcè.*

he do laugh child

“He made the child laugh.”

It is not only the overt adjacency of the verbs of the cause and the effect which allow us to analyze them as compound, but especially their ability to form a grammatical unit. In WALS Comrie discerns this difference with the comparison of Tamil (Dravidian language in South India and North Sri Lanka) and the Kobon (Madang, Papua New Guinea). Example (7) shows that verbs of cause and of effect are collocated:
(7) Tamil (Asher 1985: 155)

Naan avane veekamaa oot-a vacceen.
I heACC quickly run- purp causePST.1SG
“I made him run quickly.”

The reason why (7) cannot count as an example for the compound type is the circumstance that the verb of effect, oot-a, contains an additional final element (purpose -a). The presence of this final verb element induces that both verbs do not form a unit, but that oot-a is part of a subordinate final clause. Therefore Tamil in (7) should be considered as an example of a periphrastic CC. In reality both verbs in (7) are only collocated in final position because we consider Tamil being a language of verb final word order. The Kobon is also a verb final language and the verb of the causer and the verb of the effect are immediately adjacent. However, different from Tamil, there is evidence that both verbs actually form a grammatical unit, characteristic for the compound type, cf. (8):

(8) Kabon (Davies 1981b: 164)

a. Mab dudu.g-öp.
   tree be.bent-PERF.3SG
   “The tree is bent.”

b. Yad mab dudu.gɨyu -bin.
   1SG tree be.bent throw-PERF.1SG
   “I bent the tree.”

(8a) is an anti-causative sentence while (8b) is the corresponding causative sentence (the verb in 8b yu- lost its original meaning “to throw”; this matches our definition, whereupon the expression of the causing action of the CAUSER ought to be without specific meaning). In (8b) the verb of cause [VCaus] yu- is immediately adjacent to the verb of effect [VEffect] dudu.g-öp. The only aspect marker of the [VCaus] has its scope over the complete unit, supporting the opinion that this is a case of compounding.
2.2 Periphrastic CC

Periphrastic CC are expressions with the following three characteristics: Firstly, the expressions of the causing action [VCaus] and the effected action or change of state [VEffect] must appear in two different clauses, i.e. they must be bisentential, cf. (9):

(9) Kinyarwanda (Kimenyi 1980: 172)
Umukoobwa y-a-tum-ye n-á-andik-a amábárúwa meënshi.
girl she-PST -cause-ASP I-PST -write-ASP letters many
“The girl caused me to write many letters.”

In (9) the causer (the girl) causes me to the action of writing a letter. The German language with the construction of lassen + infinitive pertains thereof.

The term biclausal (“zweisatzwertig”) indeed seems to be understood as continuum.

Secondly, the NP of the causer and the predicate of cause (i.e. umukoobwa y-a-tum-ye in [9]) must be foregrounded, while the NP of the effected and the predicate of effect must be “backgrounded” (i.e. n-á-andik-a in [9]). In (9) this contouring of Information Structure (IS) is accomplished by the placement of the CAUSER sentence before the CAUSEE sentence. Thirdly, the expression of the causing action should not contain a specific lexical meaning. In (9) the predicate of CAUSE – tum – is semantically faded in comparison to the predicate – andik –, i.e. it has no other specific meaning than the grammatical meaning of CAUSE.

3 The morphosyntactic basics of CC and Anti-Causatives (AC) in Czech and German

The present article aims to illustrate the correlation of syntax and semantics of causative and anti-causative verbs and constructions in Czech and German; thereby contributing to the working hypothesis of the Montague grammar and its later development (the categorical grammar) which can be described in two partial hypotheses: the principle of compositionality and the principle of homomorphism. Some of the first problems raised concern the relation of causativity to transitivity,
as well as anti-causativity to reflexivity, resultativity (telicity) and the difference of intransitive ergative/unaccusative and unergative verbs.

The first part of the present article wants to define the group of constructions in which the German verb lassen + infinitive construction permits the causative in Czech. Semantic correlates of many types of situations, in German expressed by the causative meaning of the sentence (proofs 10a–24a), is expressed in Czech by constructions of partly the same, partly different structural types, cf. (10b)–(24b) (I tried to translate the German proof examples from Nedjalkov 1976: 7 into the Czech language).

(10) a. *Karl ließ den Brief fallen.
    “Karel dropped the letter.”
    b. *Karel upustil dopis. / *Nechal/*dal upustit dopis.
    “Karel dropped the letter. / *Let/gave the letter to fall.”

    “Karel let himself fall to the ground.”
    b. *Karel upadl na zem. / Karel se svalil na zem.
    “Karel fell to the ground. / Karel let himself fall to the ground.”

    “Karel let the horse gallop.”
    b. *Karel vybídl koně do cvalu.
    “Karel urged the horse into a gallop.”

(13) a. *Karl ließ seine Tochter den Brief abtippen.
    “Karel had his daughter type out the letter.”
    b. *Karel dal své dceři / nechal svou dceru naklepat dopis na stroji.
    “Karel gave his daughter / let his daughter run off a letter on the machine.”

(14) a. *Er ließ seinem Sohn die Jacke ausziehen.
    “He let his son take off his jacket.”
    b. *Vybídl svého syna, aby si sundal bundu. / *Nechal/*dal synovi si sundat bundu.
    “He urged his son to remove his jacket. / *He let/*gave (to) his son take off his jacket.”
(15) a. *Er ließ mir von seinem Sohn eine Tasse Tee geben.
   he let meDAT from his son a cup of tea bring
   “He asked his son to bring me a cup of tea.”

b. *Poprosil svého syna, aby mi přinesl šálek čaje.
   “He asked his son to bring a cup of tea to me.”

c. *Nechal/*dal mi přinesl šálek čaje / svým synem / od svého syna.
   *he let / *gave meDAT bring a cup of tea / (by) his sonINSTR / from his son
   “He asked his son to bring a cup of tea to me.”

   he asked (for) himselfDAT from his son the money to give
   “He asked his son to give him money.”

b. *Požádal syna, aby mu dal peníze.
   “He asked his son to give him money.”

c. *Nechal si / *dal si dát peníze svým synem / od svého syna.
   *he let himselfDAT / *let himselfDAT to give the money (by) his sonINSTR / from his son
   “He asked his son to give him money.”

(17) a. *Karl ließ sich (durch sie/durch ihren Besuch) nicht stören.
   Karl let himselfDAT (by her / by her visit) not disturb
   “Karl was not disturbed (by her / through her visit).”

b. *Ona / její návštěva Karla nerušila
   she / her visit Karel did not disturb
   “Her visit did not disturb Karel.”

(18) a. *Die Tür ließ sich leicht öffnen.
   the door let itself easily open
   “The door opened easily.”

b. *Dveře se lehce otevíraly.
   the door letREFL.ACC.PL easily opened3PS.PL
   “The door opened easily.”
   (i) “The door opened slightly, the door was a gap wide open.”
   (ii) “The door opened easily.”
(19) *Dveře se otevírají LEHce.*
   (i) “The door opens just slightly; the door is a gap wide open.”
   (ii) “The door opens easily.”

(20) a. *Sie ließen es sich schmecken.*
   they let it themselves taste
   “They liked it (the food).”
   b. *Chutnalo jim. / *Nechali/*dali si chutnat.*
   (it) tasted to them_{DAT} / *(they) let / (they) themselves_{DAT} taste
   “They liked it (the food).”

(21) a. *Er ließ sich bei diesem Schneider einen Anzug anfertigen.*
   he let himself_{DAT} at this tailor a suit make
   “He asked his tailor to sew for him a suit.”
   b. *Dal/nechal si ušít oblek u tohoto krejčího.*
   (he) gave / let himself_{DAT} sew a suit at this tailor
   “He asked his tailor to sew for him a suit.”

(22) a. *Mit ihm lässt sich gut arbeiten / hier lässt sich gut arbeiten.*
   with him let itself good work / here (there) let itself good work
   “One can work well with him / it is nice to work here.”
   b. *S ním se mi dobře pracuje / tady se dobře pracuje. / ? Tady se dá dobře pracovat.*
   with him itself me good work / here itself good work / ? here itself gives good work
   “One can work well with him / it is nice to work here.”

(23) a. *Die Freude ließ ihn erbleichen.*
   the joy let him (get) pale
   “The joy made him pale.”
   by the joy_{INSTR} (he) got pale / *the joy him let become pale / *gave pale
   “The joy made him pale.”
4 (Anti-)Causatives in General

Short description of syntax:
Causative constructions of the German analytical periphrastic type with lassen + infinitive construction are evidently expressed in Czech either analytically with the verb nechat, dát (lassen or geben, resp. let or give) (cf. Examples [13b], [21b]), or with a resultative transitive verb by means of a causative prefix (cf. [10b]), or with an embedded infinitive clause; that is, a construction in which the verb of the matrix clause possesses the illocution of a direct speech act (wish, request, demand = Vcaus); and the embedded verb exhibits the lexical semantics of the verb action to be performed (Veffect), containing a final subordinate clause with the final embedding\(^2\) by the conjunction aby + conditional (cf. [14b], [15b], [16b]).

Anti-causative constructions in Czech, however, are described by an intransitive unaccusative (less often unergative) verb, which either takes an overt reflexive pronoun ([18b], [22b]) or stays morphologically unmarked ([11b], [23b]).

In addition, there are more or less phraseologized resp. lexicalized solutions. Therefore, Czech can be classified morphologically as well as syntactically as a language of both the first language type (non-periphrastic CC with morphologic mark) and the second language type (periphrastic constructions with analytical expression of causativity).

---

1 For all translations into Czech there are variations imitating the German pattern. However, they do not sound Czech, but in Bohemistic literature are clearly declared as loan translations; e.g. (10) Nechali si chutnat, (9) Dveře se dají lehce otevřít or (14) Nechal se vyvézt výtahem až nahoru are possible translations, but stylistically distinctly marked as Germanisms.

**Short characterization of semantics:**

Interesting that the meaning of the causative comprises both transitive and intransitive verbs. Thereby the latter class seems to contain both unaccusative inchoative verbs (examples [11a] *fallen* “to fall”, [18a] *aufgehen* [Tür] “to open [door]”, [23a] *erbleichen* “to pale”) and unergative verbs (example (22b) *pracovat* “to work”). In any case, inchoative verbs must be involved semantically, which inevitably express the change of an action into a state or the change of one state to another state – as is the case with unaccusative verbs.

**Restrictions:**

The quite strict syntactic and morphologic restrictions are striking. Apparently, they are established on a semantic basis, which will be my task to detect. I thereby think about examples of the anti-causatives of type (18a): *Die Tür ließ sich leicht öffnen.* “The door opened easily”. The combination with the Czech verb *nechat* (to leave, to let) is ungrammatical while with *dát* (to give) it can only be combined with the *perfective aspect* of the main verb. The information structure and the kind of adverbs apparently seem to play an important role for the interpretation. Namely, if the sentence (18b) is realized with the focus on the adverb of manner and right dislocation (18c), only the interpretation of habitual modal reading can be licensed while the existing syntactic realization shows a certain ambiguity:

(18’) b. *Dveře se lehce otevírají.*

(i) “Die Tü r öffnet sich gerade leicht, die Tü r steht ein spaltbreit offen.”
   “The door is opening just slightly, the door stands open a gap.”
(ii) “Die Tü r ist leicht zu öffnen.”
   “The door opens slightly, a little bit.”

(18’) c. *Dveře se otevírají LEHce.*

(i) “#Die Tü r öffnet sich gerade leicht, die Tü r steht ein spaltbreit offen.”
   “The door is opening just slightly, the door stands open a gap.”
(ii) “Die Tü r ist leicht zu öffnen.”
   “The door opens slightly, a little bit.”
The alternation between inchoative intransitive verbs and transitive causative verbs by means of affixation is indeed a productive word formation process and occurs in Czech as well as in other Slavic languages. This results from the following evidences: Russian varit’ “to cook” – ob-varit’ “to scald”, zelenit’ “to make green, to color green” – o-zelenit’ “to plant with trees and bush”, Czech zelenět, černět, modrát, bělet “to shimmer green, black, blue, white” – (na)zelenit, načernit, namodřit, nabílit “to blacken, to color blue, to bleach”. Viset “to hang” – pověsit “to hang (up)”, zavěsit “to hang up, to hook in”, navěsit distributive: “to hang everywhere, to distribute”.

Evidences of introflexion are unproductive; however, they are proven in proto-Slavic and in the basic vocabulary of the modern Slavic languages: Czech pít “to drink” – (na)pojit “to water”, sedět “to sit” – (po)sadit “to set, to put”, těct “to flow” – (na)točit “to pour (in)”.

A further word formation process is the type přemýšlet (o něčem) “to think about something, to ponder” – promyslit něco “to think something through”. These types also allow a transitive, however, not necessarily a causative, meaning.

An inverted word formation process, productive in modern Indo-European languages, whereupon a simplex with causative-transitive meaning by means of reflexiveness changes into an intransitive reflexive verb, can be seen in the following examples: serdit’kogo-to “to annoy someone“ / serdit’sja “to be annoyed”, vernut’če-to-nibud’ “to give back, to return something” / vernut’sja “to come back, to return”, Czech zlobit (maminku) “to bore the mother” / zlobit se “to be angry”, vrátit knihu “to give back the book” / vrátit se “to return”, oblékat se “to dress himself” / oblékat někoho “to dress someone”.

My working hypothesis assumes that in the Czech example (10b) Karel is the causer [Scause], the prefix u- [Vcause], because it fulfills the same function as the lexical verb lassen in the German example (10a) and the verb pustit is the basic form of the derivation [Veffect], i.e. the state resulting from the action of falling. Yet, how to analyze unaccusative verbs like upadnout, “to fall”, in (11b)? The German example (11b) suggests that the zu Boden fallen, “to fall to the ground”, may happened deliberately and controlled, so that Karl can be interpreted both as [Scause] and [Seffect], i.e. he was both the cause (causer) and the victim (causee), while in the Czech example (11b) the property [-intentional] is not expressed. If the verb upadl na zem is substituted by the verb svalil se na zem, plácnul sebou na zem “to let oneself fall,
to chuck oneself on the floor”, the causing element and *Karel* as causer become evident. Thereby, in my opinion, to start with as an assumption and pre-theoretically, the following characteristics play an important part: the lexical semantics of the verb [±controlled, ±intentional action], the telicity (i.e. limitation, the direction of the object’s falling is expressed characteristically with a prepositional phrase) and the resulting meaning of the verb, which together with the PP signals the inner limitation of the objects with the limit *na zem* [Veffect].

(11’) a. *Karl ließ sich zu Boden fallen.*
   “Karl dropped to the ground.”
   b. *Karel upadl [na zem]. / Karel se svalil na zem.*
   “Karl fell down to the floor.” “Karl let himself fall to the floor.”

We shall now consider the examples commonly mentioned in literature about anti-causativity:

(25) a. *Hans zerbrach die Vase.*
   “Hans broke the vase.”
   b. *Die Vase zerbrach (*sich).*
   “The vase broke (*itself).”

(26) a. *Hans öffnete die Tür.*
   “Hans opened the door.”
   b. *Die Tür öffnete (*sich).*
   “The door opened (*itself).”

The examples (25a) and (26a) present transitive, causative verbs. The examples (25b) and (26b) present the intransitive, anti-causative counterparts to these causative verbs. The examples show that in the German language only two classes of anti-causative verbs are available. One class, demonstrated by the verb *sich öffnen* in (26b), must take the reflexive pronoun *sich*, together with the determiner phrase (DP) and its thematic role [Theme]. The other class, demonstrated by the verb *zerbrechen* “to break” in 25b, must not take a reflexive pronoun together with the DP [Theme]. The transitive versions of both of these types of anti-causatives do not differ from each other, they are each combined with a subject-DP and an object-DP.
In the Czech language there are equivalents in which causative alternation can be noticed; however, most verbs that are able to form a causative do not form an intransitive anti-causative, marked by a reflexive pronoun (in the following referred to as marked anti-causatives). Cf.:

(27) a. Petr posadil děvčátko na židli.
   “Petr sat the girl on the chair.”
   b. Děvčátko (*se) posadilo na židli (*Petrem).
   “The girl sat herself on the chair (*by Peter).”

(28) a. Karel unavil studenty přednáškou.
   “Karl bored the students with his talk.”
   b. Studenti (*se) unavili přednáškou (*Petrem) / Petra.
   “The students (*themselves) were bored by the talk (of Peter).”

(29) a. Marie uspala miminko. / Marie vzbudila miminko.
   “Mary made the baby sleep. / Mary woke up the baby.”
   the baby (*itself) fell asleep (*by Mary) / the baby (*itself) woke up (*by Mary)

(30) a. Slunce oteplilo vodu.
   “The sun warmed the water.”
   b. Voda (*se) oteplala (*sluncem).
   the water (*itself) warmed (*by the sun)

(31) a. Slunce, vláha a teplo nechaly dozrát/shnít žito a obilí.
   “The sun, the liquid and the heat caused the rye and the corn to mature / to rotten.”
   b. Obilí a žito (*se) dozrály / (*se) shnily.
   “The rye and the corn (*themselves) riped/rotted.”

(32) a. Emil a detektivové rozesmáli chlapce.
   Emil and detectives laugh<sub>CAUS</sub> the boy
   “Emil and the detectives made the boy laugh.”
   b. Chlapec (*se) rozesmál.
   “The boy started to laugh.”
(33) a. Vichr potrhal plachtu.
gale torn sail
b. Plachta (*se) potrhal (*vichrem).
sale (*itself) torned (*by the gale)

(34) a. Petr změnil strategii.
   “Petr changed the strategy.”
b. Strategie (*se) změnila.
   “The strategy (*itself) changed.”
c. Dřevorubec pokácel strom.
   “The lumberjack cut down a tree.”
d. Strom se zkácel (*dřevorubcem).
   “The tree fell / cut down (*by the lumberjack).”

It is remarkable that the above b-examples prove clearly that unaccusatives and impersonal passives show the same syntactic structure, i.e. the inner object becomes the subject and maintains its theta role [Theme] and the theta role [Agent] of the external argument as well as the argument itself are suppressed/reduced. The theta role [Agent] of the causative version may not be continued in the anti-causative version by means of an instrumental NP with the theta role [Agent], but at the most by means of a prepositional phrase (PP) (skrz, přes) / NP (bleskem, hromem, přednáškou) with the theta role [Instrument], [Cause] or by an adnominal genitive with the theta role of possession (cf. [28b] vs. [28a], where the instrumental NP přednáškou is [Instrument] or [Cause], but not [Agent]. This fact proves that the theta role [Agent] in fact must be suppressed similar to the impersonal se-passive).

The causative alternation between causative verb and anti-causative verb is well-proven cross-linguistically and relates to inchoative verbs only (also to verbs of change of state or change of level, like tauen “to thaw”, dick werden “to get fat”, ändern “to alter” etc.). Usually the causative alternation is taken as a test for unaccusativity, i.e. unaccusative verbs take part in it (cf. Kosta – Frasek 2004; Levin – Rappaport Hovav 1995). It follows a short recollection of the differentiation of unaccusative and unergative verbs in connection with the theory of anti-causatives.
4.1 (Anti-)Causatives and the unaccusative-unergative-opposition according to Perlmutter (1978)

Since Perlmutter’s formulation (1978) of the unaccusative hypotheses (UH) most grammar theories classified intransitive verbs as either unaccusatives or unergatives. The terminology of argument structure of the UH proceeds from the assumption that “unaccusative predicates select a single internal argument, while unergative predicates select a single external argument” (Harves 2009: 415). In syntax unaccusative predicates project their subjects VP-intern, in the position of the direct object (DO), while unergative predicates project their subjects VP-extern, similar to transitive verbs projecting basis-generated subjects. Our understanding of the syntactically different entity of unaccusative predicates goes back to various syntactic tests, which can be considered as means of diagnosis for the differentiation between both verb classes of intransitive verbs globally and cross-linguistically. Perlmutter (1978) e.g. demonstrated that the impersonal passive in the Dutch language can only derive from unergative predicates; resulting from the contrast of (35) vs. (36):

(35) Dutch impersonal passives: unergative predicates
   a. *Er wordt hier door de jonge lui veel gedanst.
      it is here from young people much danced
      “Young people danced a lot here.”
   b. *Er wordt in deze kamer vaak geslapen.
      there is in this room often slept
      “They slept in this room often.”
      “It is in this room often slept.”

(36) Dutch impersonal passives: *unaccusative predicates
   a. *Door de lijken wordt al ontbonden.
      from the corps is already decomposed
   b. *In dit ziekenhuis wordt (er) door de patienten dikwijls gestorven.
      in this hospital is it from the patients often died

Burzio (1986) was possibly the most important researcher who clarified our understanding of the characteristics of intransitive predicates within the scope of the Government and Binding theory. He observed for the
Italian language that unaccusatives differ from unergatives in at least three points: Unaccusatives select *essere* “to be” as auxiliary to build composite tenses (vs. *avere* “to have”), they demonstrate participle agreement with their subject and they allow *ne*-clitisation: Proven by the examples (37)–(39) for the Italian and (40) for the French language.

(37) Auxiliary selection
   a. *Maria è/*ha arrivata.* (unaccusative)
      Maria is/*has arrived
   b. *Maria *è/*ha telefonato.* (unergative)
      Maria *is/has phoned

(38) Past Participle Agreement
   a. *Maria è arrivat-a/*-o.* (unaccusative)
      Maria is arrived\textsubscript{FEM/*MASC}
   b. *Maria ha telefonat-o/*-a.* (unergative)
      Maria has called\textsubscript{MASC/*FEM}

(39) *ne*-clitisation (extraction of DO)
   a. *Giovanni ne\_i inviterà molti t\_i.*
      Giovanni of-them will-invite many
      “Giovanni will invite many of them.”
   b. *Ne\_i arriveranno molti t\_i.*
      of-them will-come many
      “Many of them will come.”
   c. *Ne\_i telefoneranno molti t\_i.*
      of-them-will-call many
      “Many of them will call.”
   d. *Je n’en ai pas beaucoup (= du lait).* (transitive)
      I of-them had not many (= of the milk)
      “I did not have much of the milk.”
   e. *Il n’en a pas téléphoné aujourd’hui beaucoup.* (unergative)
      *he of-them not called today much
      “He did not call many of them.”

(40) Past-Participle-Agreement in French
   a. *Anne l’a aimée.* (transitive)
      Anne her-has loved\textsubscript{FEM} (e.g. *Maria = Object Agreement with the clitic* *la*)
b. *Anne est arrivée.* (unaccusative)
Anne is arrived_{FEM}
c. *Anne a téléphoné.* (unergative)
Anne has called

The examples for *ne*-raising in Italian in (39) and for past-participle-agreement with the direct object in (40) in French prove that the syntactic subjects of unaccusatives agree with DO, i.e. subjects of unaccusatives are deep structure DO. In (39a) the *ne* “of them” from the position of the DO *molti (ne)* “many of them” is clitisised onto the verb *arrivano*. This movement is not legitimate with the unergative verb *telefonano* “they phone” in (39c). In the French language subjects of unaccusative verbs are likewise associated with DO. As demonstrated in (40a) the French language shows object agreement in the case of transitive verbs. The object agreement becomes evident for unaccusative verbs, since the subject *Anne* acts like the deep structure DO in the case of unaccusative verbs (40b = *arriver*). When *Maria* is pronominalized (*la* “her”), it pro-clitisises onto the auxiliary *avoir*, crosses the past participle and results in object agreement between the part-FEM and the pronoun-FEM. In the case of unergative verbs (40c) there is no such object agreement, for the past passive participle form *téléphoné* is not the agreeing (default) form.

4.2 Diagnosis for unaccusativity in Russian, Czech and Polish (according to Harves 2009 and Kosta – Frasek 2004)

Like the Romance and Germanic languages, there is enough evidence in Slavic languages to differentiate between unergative and unaccusative predicates. Since this differentiation will be of importance for the correlation between transitivity, intransitivity, and (anti-)causativity, I will shortly elaborate on the most important diagnosis tests for unaccusativity in the Slavic languages (Russian, Czech, Polish). They have been discussed in several papers: Pesetsky (1982), Schoorlemer (1995, 2004), Babyonyishev (1996) as well as Harves (2002, 2003, 2009) for the Russian language, Cetnarowska (2000, 2002) and Kosta – Frasek (2004) for Polish and Kosta – Frasek (2004) for Czech.
We assume that unaccusative verbs fulfill one of either semantic property: (i) they belong to the group of verbs that are subject to change-of-state, or (ii) they belong to the group of verbs that mark action-change-of-state:

(i) achievement
    event
    state

(ii) accomplishment
    event
    process
    state

The syntactic structure of unaccusative verbs corresponds with the chart (41a): Thereby, unaccusative verbs project only internal arguments with the theta role [Theme] and have no external argument with the theta role [Agent], cf. (41a):

(41) a. Unaccusatives (ergatives)

<table>
<thead>
<tr>
<th></th>
<th>VP V</th>
<th>NP</th>
</tr>
</thead>
<tbody>
<tr>
<td>[−AGENT]</td>
<td>Predicate</td>
<td>[+THEME]</td>
</tr>
</tbody>
</table>

Conversely, unergative verbs demonstrate a syntactic structure whose external argument contains the thematic role [Agent] or another thematic role and the internal argument with corresponding thematic role [Theme] is absent or rather, not projected, cf. (41b):

(41) b. Unergatives

<table>
<thead>
<tr>
<th>SpecvP</th>
<th>vP v</th>
<th>NP</th>
</tr>
</thead>
<tbody>
<tr>
<td>[+AGENT]</td>
<td>Predicate</td>
<td>[−THEME]</td>
</tr>
</tbody>
</table>

Accordingly, one has to assume that unaccusative verbs only form a lexical projection (VP) with a single internal argument (complement) (cf. 41a):
Transitive verbs demonstrate a light vP-projection which the nominative case (in Spec) is assigned to as well as a lexical projection which the thematic role [Theme] is assigned onto the internal argument, cf. (41b’):

When assuming a coherent structure in all of the three verb classes, in which the issue of projection is decided by the process of MERGE and MOVE, namely in dependence of the lexical structure of the root (of which more later, cf. section 6), the result is one of the below possibilities of MERGE and MOVE:

Petr pracoval. = Petr dělal práci.
Proceeding gradually, our attempt is now to differentiate the class of ergative (unaccusative) verbs from the class of unergative verbs. There are five syntactic tests available. The fact that subjects of unaccusative verbs are deep structure objects (i.e. internal argument of the lexical verb) allows the following predictions:

(42) a. *Petr rozbil sklenice.*
    *Peter*\textsubscript{NOM,SG} broke *glasses*\textsubscript{ACC,PL}

b. *Piotr zgubił rękawiczki.*
    *Peter*\textsubscript{NOM,SG} lost the *gloves*\textsubscript{ACC,PL}

(43) a. *Petrovi se rozbily sklenice.*
    *Peter*\textsubscript{DAT,SG~REFL} \textsubscript{PRET.-3PS,PL,FEM} broke *glasses*\textsubscript{NOM,PL,FEM}

b. *Piotrowi (zgubiły się) zginęły rękawiczki.*
    *Peter*\textsubscript{DAT,SG~REFL} \textsubscript{PRET.-3PS,PL,FEM} loose *gloves*\textsubscript{NOM,PL,FEM}

1. Test for ergativity/unergativity: anaphora vs. pronoun

Only real subjects can take reflexive pronouns (anaphora) according to principle A of the binding theory. The fact that in (44b) and (44d) anaphora cannot be bound implies a position below the anaphora.
Ergative verbs *Anaphora/AplPronoun

(44) a. *Sklenice se mu (= Petrovi) rozbily.
glasses NOM.PL.FEM CL-REFL.DAT.3PS.SG CLAPL.DAT.3PS.SG breakPRET.3PS.PL.FEM
b. *Sklenice se (*si/sobě) (= Petrovi) rozbily.
glasses NOM.PL.FEM CL-REFL CLFEFL.DAT.3PS.SG breakPRET.3PS.PL.FEM
c. *Rękawiczki mu zgubi(y/zginęł) się/*się.
gloves NOM.PL.FEM CLAPL.DAT.3PS.SG loosePRET.3PS.PL.FEM CLREFL.DAT.3PS.SG
d. *Rękawiczki (*sobie/się) zgubi(y/zginęł) się/*się.
gloves NOM.PL.FEM CLREFL.DAT.3PS.SG loosePRET.3PS.PL.FEM CLREFL.DAT.3PS.SG

Conversely, unergative verbs can bind anaphora, for here the subject is base-generated as antecedent.

Unergative verbs Anaphora/*AplPronoun

(45) a. *Petr si leží/pracuje/stojí/zpívá.
   Peter himself CL-REFL.DAT.3PS.SG lies/works/stands/sings
   Peter him CLAPL.DAT.3PS.SG lies/works/stands/sings
   Peter himself CL-REFL.DAT.3PS.SG lies/works/stands/sings
   Peter him CLAPL.DAT.3PS.SG lies/works/stands/sings

2. Test for ergativity (according to Abraham 2003): Past passive participle (PPP) of ergative verbs is grammaticalized as adjunct of the deep structure object; for unergative verbs the result is ungrammaticality (*):

(46) a. Svalený ze svahu kámen. ← Kámen se svalil ze svahu. (ergative Verb = eV)
The tumbled down the slope rock ← The rock tumbled down the slope.
b. Rozbité větrem sklenice. ← Sklenice se rozbily. (eV)
shattered by the wind glasses ← The glass shattered.
rrolled on the earth matters ← The things were rolling on the ground.
(47) a. *Pracovaný Petr ← Petr pracoval. (unergatives Verbs = uV)
    *work-worn Peter ← Peter worked.

    b. Upracovaný Petr ← Petr se upracoval. (eV)
       work-worn Peter ← Peter worked himself dead

3. Test for ergativity (according to Abraham 2003): eV cannot form
   agent nouns (nomina agentis):

(48) a. Vítr se utišil. → *utišitel, *utišník (eV)
    “The wind calmed down.” → *the calming, *the calmer

    b. Petr pracoval. → pracovník
    “Petr worked.” → the worker (uV)

    c. Lano se napnulo. → *napínatel (eV)
    “The line stretched.” → *The releaser

    d. Petr stavěl dům. → stavitel, stavebník (transitive
    Verb = tV)
    “Petr built a house.” → the builder, the constructor

4. Test for ergativity (according to Abraham 2003): eV cannot be pas-
sivized by an impersonal se-passive, uV and tV can be passivized:

(49) a. *Vítr byl/bude/je utišen Petrem.
    *the wind was / will be / is calmed by Peter

    b. Vítr se utišil (*Petrem).
    the windREFL calmed down (*by Peter)

    c. Vítr se utišil.
    the windREFL calmed down

    d. Lano bylo napnuto Petrem.
    the line has been stretched by Peter

    e. Lano se napnulo (*Petrem).
    the lineREFL stretched (*Peter)

    f. Kámen byl svalen Sisyfem.
    the rock was tumbled and rolled down by Sisyphus

    g. Kámen se vykutálel na svah (*Sisyfem).
    the rock is rolled in on the rise (*by Sisyphus)

    h. Kov se tavi ohněm.
    the metal is melted by fire

    i. *Led taje sluncem // pomocí slunce, skrz slunce = o.k.
    *ice thaws by the sun // from the sun, throughout the sun = o.k.
Tam se staví, stanuje, hraje, zpívá, běhá, leží, stojí.
*there it is built, played, sung, run, layed, stood (in English, impersonal passives of this kind are forbidden)

5. Test: distributive po-phrases (according to Harves 2009) in the Czech language not relevant:

(51) a. Ztratilo se mi po jedné knížce z každého regálu.
    it has been lost to me one after another book\textsubscript{DISTRIBUTIVE} from each shelf
b. Zpívalo tam po jednom pěvci v každém chóru.
    it has been sung there one after another singer\textsubscript{DISTRIBUTIVE} in each choir
c. Za druhé světové války umíral jeden po druhém.
    during the Second World War died one after another
d. Za druhé světové války pracovalo v muničních fabrikách po pěti ženách u jednoho běžícího pásu.
    during the Second World War, there worked in munitions factories five women each in every treadmill

6. Test = test for negation (GenNeg) in the Czech language not relevant.

In Polish, the direct object of a transitive verb must be assigned genitive of negation if it is in the scope of clausal negation. In Czech, the genitive of negation is not productive and this is the reason why the accusative case is assigned to the direct object NP. Only real object (deep structural objects) can be assigned genitive of negation, not a deep structure subject, cf. the difference between ergatives rękawiczek mu nie zgubiło się vs. unergatives *Piotra nie śpiewa // Piotr nie śpiewa.

5 Motivation of derivation of Anti-Causatives marked with reflexive pronoun

The following section discusses the marked anti-causatives from the perspective of non-thematic reflexive pronouns and the applicative datives.

Chomsky (1999, 2000a, b) assumes that next to CP there are only transitive vPs in sentence structure. (Below we refer to this phase as
VOICE/DIATHESES-phase according to Schäfer 2008: 263, because as functional phase it has importance for the causative-anti-causative-dichotomy. In contrast, the passive and unaccusative vPs are no phases according to Chomsky. Since the marked anti-causatives of the type auto se rozjelo setrvačností “the car drove away by force of inertia”, lod’ se potopila “the boat sank”, but also examples of type (18)–(18a) Die Tür ließ sich leicht öffnen, (18b) Dveře se lehce otevíraly, can be classified semantically as unaccusatives, with the simultaneous assumption that the reflexive marker refers to transitivity (for more detail see Schäfer 2008: 263), we are confronted with the theoretical problem of how to solve the phase-theoretical status of such anti-causatives. Legate (2003) on the other hand assumes that not only transitive but all verbal phases are phases, including anti-causative and semantic unaccusative phases. If this is correct, we have to explain how TENSE checks its characteristics against the Theta-role THEME within the vP phase in unmarked or marked unaccusatives. This refers to both the marked anticausatives (with reflexive pronouns, type otevřít se, rozbit se) and unmarked anticausatives of the type fallen, schmelzen (padat, tát).

5.1 The theory of (Anti-)Causative and Passive according to Alexiadou (2006a, b)

We already discussed the most important problems of causative alternation. At this point finally I want to go into detail about two recent theories: Alexiadou et al. (2006a, b) and Schäfer (2008).

The discussion of the causative alternation was mainly concerned with the semantic analysis of both classes of unaccusative verbs (AU and NAU). It remains to clarify how anti-accusatives behave towards the passive. As repeatedly noted in respective literature anti-causative and passive differ in the following aspects (cf. Marantz 1984, Baker, Johnson – Roberts 1989, Kosta 1992, Levin – Rappaport Hovav 1995, Reinhart 2000 and Schäfer 2008): (i) modification and control, (ii) verbal restrictions in the case of passivation.

(i) Modification and control
Passives, but not anti-causatives can be modified by an Agent by-phrase (in Czech Instrumental-NP), by Agent-oriented adverbs (subject adverbs) and by control in embedded final sentences:
Passive-Agents vs. *Anti-causative-Agents

(52) a. *The boat was sunk by Bill.
   b. *The boat sank by Bill.

(53) a. *Das Boot wurde durch Bill versunken.
   b. *Das Boot sank durch Bill.

(54) a. Loď byla potopena Billem.
   b. *Loď se potopila Billem.

Agent-oriented Adverbs

(55) a. The boat was sunk by purpose.
   b. *The boat sank on purpose.

(56) a. Das Boot wurde absichtlich versenkt.
   b. *Das Boot sank absichtlich.

(57) a. Loď byla potopena naschvál.
   b. *Loď se (mu) potopila naschvál.

Control in embedded final sentences

(58) a. The boat was sunk to collect the insurance.
   b. *The boat sank to collect the insurance.

(59) a. Das Boot wurde versenkt, um eine Versicherungsprämie zu kassieren.
   b. *Das Boot sank, um die Versicherungsprämie zu kassieren.

(60) a. Loď byla potopena, aby dostali peníze od pojišťovny.
   b. *Loď se potopila, aby dostala/dostali peníze od pojišťovny.
   c. *Loď se potopila pro peníze pojišťovny.

(ii) Verbal Restrictions
Theoretically, every transitive verb can be passivated. However, a minor subgroup of transitive verbs can also form anti-causatives. This will be demonstrated with the example of three verb groups: the verbs
brechen, break, rozbiť permit both passivation and causativation; schneiden, cut, krájet, stříhat, řezat permit passives but no anti-causatives, although as verbs of change of state they likewise fulfill the semantic conditions for causative alternation. Finally, transitive verbs such as lesen, read, číst are indeed capable to be passivated; but a verb that does not change a state can never form an anti-causative:

(61) a. Bill broke the glass.
    b. Bill zerschlug das Glas.
    c. Bill rozbił sklo.

(62) a. The glass was broken by Bill.
    b. Das Glas wurde von Bill zerschlagen.
    c. Sklo bylo rozbito Bilem.

(63) a. The glass broke.
    b. Das Glas zerschlug.
    c. Sklo se rozbil.

(64) a. The baker cut the bread.
    b. Der Bäcker schnitt das Brot ab.
    c. Pekař krájel chléb.

(65) a. The bread was cut by the baker.
    b. Das Brot wurde vom Bäcker abgeschnitten.
    c. Chléb byl krájen pekařem.

(66) a. *The bread cut.
    b. *Das Brot (zer)schnitt.
    c. *Chléb se ukrojil.

(67) a. John read the book yesterday.
    b. John las das Buch gestern.
    c. John četl knihu včera.

(68) a. The book was read yesterday by John.
    b. Das Buch wurde von John gestern gelesen.
    c. Kniha byla čtena včera Johnem.
Concerning the two differences (modification and control), it is generally agreed that the reason is the presence vs. absence of implicit external arguments in passives vs. anti-causatives. The fact that passives contain an implicit external argument, can – according to the theory of Baker – Johnson – Roberts (1989) – be explained in the way that n-/t-passives contain an implicit external argument which through the modification (by an by-phrase or an Agent-oriented adverb) can again be reconstructed and control a finite sentence; this is not an option for anti-causatives, because an anti-causative does not contain an this external argument (remember that most anti-causatives are derived from unaccusative verbs).

While these assumptions are consensus, the question in which form this implicit external argument in the passive-diathesis is to be represented poses a problem.3


Furthermore, there is disagreement about why anti-causatives lack an implicit external argument.

Schäfer (2008: 117) discusses two logically possible approaches: (i) According to one approach anti-causatives lack an implicit external argument, because they are “basically monadic”. The causative alternant derives from an anti-causative/inchoative alternant via the operation of causativation (“causativization”), i.e. via adding a causative predicate (CAUSE) to the semantic decomposition. This operation is demonstrated by (70):

\[
\begin{align*}
(70) \quad \text{a.} & \quad \text{break}_{\text{INCHO}}: \lambda x \  [\text{BECOME} \  \text{broken}(x)] \\
\text{b.} & \quad \text{break}_{\text{CAUS}}: \lambda y \lambda x \ [(y) \ \text{CAUSE} \ [\text{BECOME} \  \text{broken} \ (x)]]
\end{align*}
\]

3 Cf. Levin – Rappaport Hovav (1995) see this problem in the lexical syntactic representation of verbs, i.e. in their argument structure; others in the semantic representation (Reinhart 2002) and others even in syntax (Baker – Johnson – Roberts 1989 and Kratzer 1996).
According to the (ii) second approach alternating verbs are inherently dyadic predicates. Anti-causatives are lacking an implicit argument because of the lexical process of detransitivation, which leads to an intransitive entry of the transitive verb.

(71) Levin – Rappaport Hovav (1995: 83, 108) suggest a bi-eventive analysis of causative verbs. Their lexical-semantic representation (LSR) of such verbs includes the predicate “cause”, which takes two arguments: the causing sub-event and the central sub-event (which causes the change of state of the verb). The CAUSE-argument is associated with the causing sub-event and the THEME with the central sub-event.

As for the transitive verb *break* the CAUSE and the THEME are projected from the LSR into the argument structure (AS) and further into the syntax, as demonstrated by (72):

(72) Transitive “break”:

\[
\text{LSR} \quad [[x \text{ do-something}] \text{ cause } [y \text{ become BROKEN}]]
\]

\[
\text{Linking rules} \quad \downarrow \quad \downarrow
\]

\[
\text{AS} \quad \langle x \rangle \quad \langle y \rangle
\]

For the intransitive *break* the CAUSE-argument is “lexikalisch abge-bunden” (*lexically detached/un-bound*) in the mapping from LSR to AS and can thus not be projected into the syntax, cf. (73)

(73) Intransitive “break”:

\[
\text{LSR} \quad [[x \text{ do-something}] \text{ cause } [y \text{ become BROKEN}]]
\]

\[
\text{Lexical binding} \quad \emptyset \quad \downarrow
\]

\[
\text{Linking rules}
\]

\[
\text{AS} \quad \langle y \rangle
\]

Reinhart (2000, 2002) suggests regarding causation as its lexical operation, which is coded by the lexical feature “cause”, formalized as [+c], being part of the definition of a Theta-set that can cause a change,
namely *cause, agent and instrument*. Agents are to be positive for the feature [+m] (mental state), i.e. agents are defined by the combination [+c+m]. Instruments are defined by the feature-cluster [+c−m]. However, their presence is to implicate the existence of an agent due to a lexical generalization. Cause is characterized by the feature [+c], which is consistent with the [+c+m] and [+c−m] specification (whereby the generalization is captured that verbs selecting cause arguments can also select instruments and agents). Themes are defined by the feature cluster [−c−m]. According to Reinhart alternating verbs are inherently transitive. They select an [+c] external argument (which can be realized as agent, cause or instrument) and a [−c−m] internal argument (i.e. Theme). Anti-causatives are lexically derived from a transitive dictionary entry by a reduction operation, called “expletivization”, by which the external [+c] Theta-role is reduced. The output of this expletivization is a monadic/one-place predicate, i.e. an intransitive verb. This lexical operation is illustrated by (74):

(74) Expletivization: Reduction of an external [+c] role
a. $V_{\text{acc}} (\theta_1 [+c], \theta_2) \rightarrow R_e (V) (\theta_2)$
b. $R_e (V) (\theta_2) = V (\theta_2)$

5.2 The theory of (Anti-)Causatives according to Schäfer (2008) and Alexiadou et al. (2006a, b)

Alexiadou et al. (2006a, b) proceed from the assumption that agentivity and causativity are represented by various heads of the decomposition of causatives, and that (according to Kratzer 2005) the eventive event-head in causatives is identical with the ones in anti-causatives. Their arguments are the following:

(i) The by-phrase (in Czech instrumental) licenses the same type of external arguments as it is licensed being active. On the other hand, we do know that anti-causatives do not licence by-phrases:

(75) a. *John / the explosion / Will’s banging broke the window.*
b. *The window was broken by John / by the explosion / by Will’s banging.*
c. *John / die Explosion / Will’s Schlag zerschlug das Fenster.*
The contrast between (75) and (76) is considered as an indication that actives and passives have the potential to assign an external theta-role while anti-causatives do not have this potential. A possible explanation is the analysis that passives and actives have a projection voice which anti-causatives are lacking. However, anti-causatives can license CAUSERS and CAUSING EVENTS cross-linguistically, though no agents, namely by means of a prepositional phrase, cf.:

(77)  a. *The window broke from the explosion / Will’s banging.
    b. *The door opened from Mary.
    c. Okno se rozbilo od exploze / skrz explozi.
    d. *Okno se rozbilo od Marie.
    e. *Das Fenster öffnete sich von Maria.
    f. Das Fenster öffnete sich durch die Explosion.

This fact allows us to assume that the anti-causatives contain a causative semantic which licenses a CAUSER-PP.

6 The morphologic analysis of the lexicon:
   the four ROOTS and the encyclopedic lexicon

Therefore, we can decompose the ANTI-CAUSATIVES according to Alexiadou et al. (2006a, b) from a $\sqrt{\text{Root} + \text{Theme}}$ complex which expresses a resultative state and contains a verbal event-head CAUS which takes the resultative state as a complement. CAUS engenders a causal relation between the CAUSING EVENT (the implicit argument of CAUS) and the resultative state which is denoted by
Additionally, causatives show (active and passive) a VOICE-projection at TOP of CAUS which is responsible for the introduction of an external argument. That way there is no directional relation between the causative-anti-causative-alternation, since no construction is directly derived from the other. Instead, both derive from the same root, cf. (78):

(78) The abstract decomposition of anticausatives

[CAUS [√ Root + DP_theme]]

(79) The abstract decomposition of causatives

[DP external argument VOICE [CAUS [√ Root + DP_theme]]]

The decomposition according to Schäfer (2008: 140) is illustrated by the following examples:

(80) a. Peter opened the door.
b. Petr otevřel dveře.
c. Peter öffnete die Tür.
d. [Peter VOICE [CAUS [the door √open.]]]

(81) a. The door opened.
b. Dveře se otevřely.
c. Die Tür öffnete sich.
d. [CAUS [the door √open.]]

The important restriction: VOICE does not introduce an event itself, but only expresses the relation between the element in a specifier and the event in the complement position (CAUS). This is also the original conception of voice as introduced into categorial grammar and the conception of Kratzer (1996).

VOICE contains characteristics which specify the thematic roles of the external arguments and the corresponding manner: The presence of a feature [±agentive] is responsible, that in active and passive constructions AGENT and CAUSER are licensed as external arguments. Agentive VOICE (VOICE [+AG]) licenses agentive NPs and instrumental PPs in active and passive; non-agentive VOICE (VOICE [−AG]) licenses CAUSERS in active and passive. When a VOICE-head is active, the argument with the corresponding thematic role is realized.
as SPECIFIER; when it is passive, the argument with the corresponding thematic role is implicit.

Concerning the existence of PPs in passives and anti-causatives, Alexiadou et al. (2006a, b) assume that adjunct-PPs are licensed by a structural layer which contains the relevant semantic characteristics. The decomposition in (78) and (79) shows two types of licensing heads, VOICE and CAUS for the PPs. Passive voice with the feature [+AG] licenses agents and real instrumental prepositional phrases while passive voice with the feature [−AG] (licenses) CAUSER by/phrase in English or CAUSER – or by-PPs in German and CAUSER- by PPs in Czech. Those causative PPs that occur in anti-causatives in English (from), in German (durch), in Czech (od, skrz), or in Greek (apo-, me-), are licensed thematically by CAUS.

The final component in the analysis of decomposition is the neutral category ROOT. Alexiadou et al. (2006a, b) and Schäfer (2008: 141) assume that the roots function as “residue of lexical entries” and contain information about whether or not a verb enters causative alternation. Thereby, at least the following verb types (or verbal classes) are to be divided into four different ROOTS:

(82)  
[1.] A large class of verbs that limit their arguments to the external theta role AGENT: cut, schneiden, krájet, cf. (83). This is the class that was taken by Levin – Rappaport Hovav (1995) and Reinhart (2000) as the decisive criterion for the CAL.

[2.] A smaller group of verbs which allow both AGENT and CAUSE as subjects, but are not anti-causatives, for example, destroy, vernichten, zničit, cf. (84).

[3.] ROOTS/verbs that are both causatives and anti-causatives. E.g. break, brechen, rozbit (se), cf. (85).

[4.] ROOTS/verbs that build only anti-causatives/inchoatives, but no causatives, cf. blossom, bloom, blühen, rozkvěst se (in 86).

(83)  
a. The baker cut the bread. (agent subject)
b. Der Bäcker schnitt das Brot.
c. Pekař krájel chléb.
d. *The lightning cut the clothesline. (*causer subject)
e. *Der Blitz schnitt die Wäscheleine.
f. *Bouřka krájela drát.
g. *The bread cut. (*anti-causative)
h. *Das Brot schnitt.
i. *Chléb se krájel.

(84) a. John destroyed the parcel. (agent subject)
b. The explosion destroyed the parcel. (causer subject)
c. *The parcel destroyed. (*anti-causative)
d. John zerstörte das Grundstück.
e. Die Explosion zerstörte das Grundstück.
f. *Das Grundstück zerstörte.
g. John zničil parcelu.
h. Exploze zničila parcelu.
i. *Parcela se zničila.

(85) a. The vandals broke the window. (agent subject)
b. The storm broke the window. (causer subject)
c. The window broke. (anti-causative)
d. Die Vandalen brachen das Fenster.
e. Der Sturm brach das Fenster.
f. Das Fenster brach.
g. Vandalové rozbili okno.
h. Bouřka rozbila okno.
i. Okno se robilo.

(86) a. *The gardener blossomed the flower. (*agent subject)
b. *The warm weather blossomed the flower. (*causer subject)
c. The flower blossomed. (anti-causative)
d. *Der Gärtner (er)blühte die Blumen.
e. *Das warme Wetter erblühte die Blumen.
f. Die Blumen erblühten.
g. *Zahradník rozkvetl květiny.
h. *Teplé počasí rozkvetlo květiny.
i. Květiny rozkvetly.

Alexiadou et al. (2006a, b) propose that ROOTS are classified differently according to their encyclopedic semantics (also cf. Marantz
In accord with the terminology of Levin – Rappaport Hovav (1995), ROOTS are referred to as agentive if they form verbs that have AGENT as subject. ROOTS that form verbs which do not restrict the external argument to a specific semantic role, but all the same do not form anti-causatives, are referred to as “externally cause”. ROOTS forming verbs which agree to causative alternation are referred to as “cause unspecified” and ROOTS forming verbs which form only inchoatives/anti-causatives, but no causatives are referred to as “internally caused”. The index (87) illustrates this classification:

(87) √agentive (murder, assassinate, cut)
√internally caused (blossom, wilt, grow)
√externally caused (destroy, kill, slay)
√cause unspecified (break, open, melt) (according to Schäfer 2008: 142)

Furthermore, Schäfer (2008: 161) specifies a spontaneity scale which describes the syntactic frame of a ROOT. ROOTS of the types √agentive and √externally caused are associated with events of low spontaneity and a transitive syntax. ROOTS of the type √internally caused express events with high spontaneity and require an intransitive syntax. ROOTS of the type √cause unspecified are located in between and can express both syntactic frames. Cf. (88), index 2:

(88) Index 2: Spontaneity scale (all types of ROOTS)

√agentive < √externally caused < √cause unspecified < √internally caused
- spontaneous < ... ... ... ... ... ... ... < +spontaneous
... ... ... ... <-transitiv... alternate ... ... intransitiv

7 The syntactic projection of the lexical ROOTS

(89) The structure of agentive causatives:
*Rosa/the sun melted the ice.* (intentionally/non-intentionally)
(90) The structure of non-agentive causatives:

The sun melted the ice.

(91) The structure of non-intentional cause-construction
Syntactic analysis (first approach):
Intransitive anti-causatives are derived syntactically by the addition of non-active morphology: in Czech and German this is the non-active, semantically faded reflexive morpheme *sich/se* or its empty counterpart, the reflexive morpheme $\text{refl}_{\text{pron}}$ as a further empty pronominal category to *pro* and *PRO* (with the function of [+anticaus] anti-causation resp. intransivation). Since the head of the light $v$ only shows the single and first feature [+cause], it is suppressed and results in the structure (92).

(92) The structure of intransitive (not agentive) anti-causatives

```
<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>vP</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Spec: Agent</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>v'</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>vο</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>VP</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>{ [+cause] }</td>
</tr>
<tr>
<td>se/sich/refl_{pron}</td>
</tr>
<tr>
<td>Spec</td>
</tr>
<tr>
<td>V'</td>
</tr>
<tr>
<td>V</td>
</tr>
<tr>
<td>Compl</td>
</tr>
</tbody>
</table>
```

The morphology and syntax are engendered by a feature-suppression operation in (93), homomorphous to the semantics.

(93) **Definition of non-active/unaccusative morphology:**
Non-active (and/or unaccusative) morphology suppresses the first feature in the predicate structure (cf. Kallulli 2006c: 289; Schäfer 2008: 91)

How does this operation (93) proceed on the level of syntax? We already pointed out that intransitive anti-causatives derive syntactically by the addition of non-active morphology: in Czech and German this is the non-active, semantically faded reflexive morpheme *sich/se* or its empty counterpart, the reflexive morpheme $\text{refl}_{\text{pron}}$ as a further empty pronominal category to *pro* and *PRO* (with the function of [+anticaus] anti-causation resp. intransivation).

We now need a syntactic explanation for the suppression (reduction) of the external arguments. We assume that anti-causatives indeed are
semantically intransitive, but syntactically transitive; i.e. there are two case-marked DPs but only one semantic argument of the verb. This assumption automatically leads to the following question: If marked anti-causatives involve two syntactic arguments, the THEME and the reflexive pronoun, which of those two is internally and which is externally connected through Merging? At first glance different modules of grammar provide different solutions:

**CASE THEORY**: the thematic role THEME has the casus nominative and the reflexive pronoun the casus accusative. German and Czech are accusative languages. Therefore, the nominative is to be assigned to the external argument and the nominative to the internal argument. Thus, the THEME appears to be the external argument.

**BINDING PRINCIPLE A**: An anaphor has to have a c-commanded antecedent. This suggests that the THEME is merged externally and the reflexive pronoun internally.

**CONFIGURATIONAL THETA-THEORY (i)**: THEMES are always internally combined through Merging. Thus, the external argument position would be free for the reflexive pronoun.

**CONFIGURATIONAL THETA-THEORY (ii)**: Both internal and external Merging is to entail. However, *sich/se* has no Theta-role.

The fact that many languages distinguish morphologically between unmarked and marked anti-causatives (with reflexive pronouns) is solved in lexicalist theories by means of assuming a dyadic structure for causative alternation and an operation of detransitivation in the lexicon that concerns the external argument. This operation was already introduced in (93) as “lexical binding” (following Levin – Rappaport Hovav 1995), resp. as “expletivization” (following Reinhart 2000, 2002). According to these theories the specific morphology in the case of marked anti-causatives that a detransitivation occurred.

8 **Summary**

In this paper the features of externally and internally caused verbs have been described, and connected with the phenomenon of Unaccusativity. It was my approach to elaborate the relation between lexicon and syntax, including the concept of distributive morphology and the ROOT-semantics of verbs that do, resp. do not partake in causative alternation and Unaccusativity.
The Causative Alternation served as criteria to distinguish between externally and internally (caused) causation; with its help the Unaccusativity verbs have been divided into two subclasses: alternating Unaccusativity (AU-) verbs and non-alternating Unaccusativity (NAU-) verbs. An alternative distinction between AU- and NAU-verbs has been found, namely the presence/absence of information about how the considered process was caused. Thereby the universal concept of encyclopedic lexica in the languages English, German and Czech seems to assume at least four different ROOTS of verb as basis for classification of the anti-causativity-opposition: √agentive (murder, assassinate, cut), √internally caused (blossom, wilt, grow), √externally caused (destroy, kill, slay) and √cause unspecified (break, open, melt).

Furthermore, it has been shown that unergative/causative pairs depict an independent phenomenon and do not effect the considerations about CAL (in accordance with Alexiadou et al. 2006a, b and Marantz 1997; but not in accordance with Levin – Rappaport Hovav 1995 and Reinhart 2000).

Frequent Abbreviations
CAL = Causative Alternation
CC = Causative Construction
AU- = Alternating Unaccusative Verbs
NAU- = Non-Alternating Unaccusative Verbs
VCaus = Verb of Cause
VEffect = Verb of Effect
Dveře se otevírají LEHce. = Capital letters mark focus or contrast

Bibliography


In this paper the features of externally and internally caused verbs have been described, and connected with the phenomenon of Unaccusativity. It was my approach to elaborate the relation between lexicon and syntax, including the concept of distributive morphology and the ROOT-semantics of verbs that do, resp. do not partake in causative alternation and Unaccusativity.

The Causative Alternation served as criteria to distinguish between externally and internally (caused) causation; with its help the Unaccusativity verbs have been divided into two subclasses: alternating Unaccusativity (AU-) verbs and non-alternating Unaccusativity (NAU-) verbs. An alternative distinction between AU- and NAU-verbs has been found, namely the presence/absence of information about how the considered process was caused. Thereby the universal concept of encyclopedic lexica in the languages English, German and Czech seems to assume at least four different ROOTS of verb as basis for classification of the anti-causativity-opposition: √agentive (murder, assassinate, cut), √internally caused (blossom, wilt, grow), √externally caused (destroy, kill, slay) and √cause unspecified (break, open, melt).

Furthermore, it has been shown that unergative/causative pairs depict an independent phenomenon and do not effect the considerations about CAL (in accordance with Alexiadou et al. 2006a, b and Marantz 1997; but not in accordance with Levin – Rappaport Hovav 1995 and Reinhart 2000).