Verbal Aspect and the Frame Elements in the FrameNet for Polish

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This paper deals with theoretical and practical problems involved when describing a language from the morphological aspect within the FrameNet. In terms of aspect and in lexicographical description of the Polish language, there is a tendency to treat pairs where the aspectual distinction is marked by suffix as a single lexical unit. Where the aspectual distinction is marked by a prefix, pairs represent different units, e.g. kaszlnac *(pf. to give a cough)* -kaslac *(impf.to cough repeatedly) vs.* pisac *(impf. to write, to be writing)* -napisac *(pf.to have written). More complex sense relations between perfective and imperfective verbs complicate matters even more. In addition, aspectual pairs differ in terms of what constitute their core frame elements. Many perfectives differ from their imperfective counterparts since they transform temporal quantification from a non-core to a core element of the frame, e.g.* Przesiedzial w bibliotece dwie godziny, studiujac rekopisy. (He sat for two (solid) hours in the library, poring over the manuscripts) vs. Siedzial w bibliotece (przez) dwie godziny, studiujac rekopisy (He sat in the library for two hours, pouring over the manuscripts)*. Because of this, in the Polish version of FrameNet, each member of an aspectual pair will be initially given a separate description. Once the respective frames and frame elements for each perfective and imperfective member of an aspectual pair are established independently, the two putative frames will be compared in order to see if they can be conflated into a single frame.*

Introduction

The Frame Theory, first formulated in Minsky (1980), has been adopted for linguistic description by Ch. Fillmore (Fillmore 1982 and Fillmore, Atkins 1992). Within this theory the sense of all linguistic expressions is drawn not only from their meaning defined within the linguistic code, but also from beliefs, experience and knowledge about typical behaviors. These, in turn, constitute an interpretation frame for instances of an expression's use.

Some frames are interrelated and form a special net, in which lexical units are related through sharing a frame or belonging to related frames, as it has been shown for the frame of commercial transaction (cf. Fillmore 1982). In this case the frame semantics shows explicitly shows the relations among the expressions senses. On the other hand, it has been proven that some lexical units, although intuitively related, should be interpreted within different frames to account for the distinctions in meanings, e.g. the original *thrifty—mean* example in Fillmore (1982).

It has been argued (Fillmore 1982, 1985) that Frame Semantics offers innumerable advantages over the so-called Truth Semantics. It also offers some advantages over the classical componential semantics, freeing the linguists from the preoccupation of introducing more or less universal and/or simple enough semantic primes and allowing them to concentrate on the relevant elements of a situation, that can be further construed as semantic elements of a given semantic or lexical field, cf. Lowe; Collin; Fillmore (1997).

The FrameNet (FN) methodology (Atkins 1995) has been applied to several languages, including English, Spanish, German and Japanese. For Polish the FN projects was launched in 2007, founded by the Polish Ministry of Science and Higher Education, grant nr MNiSW N104 024 32/1840.

FrameNet for Polish: project's background and goals

Since Polish is not so widely spoken a language and the resources are rather limited, the initial project is conceived as a pilot study. It is also designed to draw, whenever possible, on previous and simultaneous studies into Polish syntax (*Słownik syntaktyczno-generatywny czasowników polskich*, Saloni; Świdziński 1998), Polish corpus linguistics, including syntactical parsing (Świdziński 1992), and lexicography (cf. *Inny słownik języka polskiego*, *Słownik współczesnego języka polskiego*, *Uniwersalny słownik języka polskiego*). The pilot study will comprise about 200 lexical units that simultaneously meet two criteria: they need to be richly represented in the available corpora (Polish Academy of Sciences Corpus, cf. Przepiórkowski (2004) and have their equivalents present in FNs constructed for other languages.

One of the goals of this project is to try to either prove or disprove various theoretical assumptions about Polish, and to evaluate the feasibility of using language resources already in place. However, the team is aware that there is a strong potential for conflict, or at least incompatibility, between the description of Polish on the basis of available data and the body of previous analyses on the one hand, and the other FNs, in terms of number and structure of the frames, on the other. Whenever possible, the technique for establishing lexical units will follow the lexicographical description of Polish, available in such dictionaries as *Inny słownik języka polskiego*, *Słownik współczesnego języka polskiego*, *Uniwersalny słownik języka polskiego*), compiled in the last decade. We believe that the lexicographical practice, the more pre-theoretical or counter-theoretical the better, offers some valid information about the usage which can be easily translated into appropriate frames and/or frame elements. Lexicographers aim at giving information about the actual use and are rarely concerned about fine-honed distinction between internal-linguistic and extralinguistic phenomena. Thus the actual lexicographic descriptions appear to reflect fairly adequately the real-life language use and the speakers' awareness of their own language.

The case of aspect: aspectual pairs and lexical units

Among the languages participating within the FN Project, Polish is the first one to possess the so-called morphological aspect.[1] The problem of aspect needs to be addressed at the very beginning of the project's design. The question is whether some or any such aspectual pairs should be considered a single lexical unit. However, a much larger picture is involved, including the very nature of aspectual distinction and the notion of the aspectual pair.

The theories of aspect range from postulating a single semantic distinction that would be valid for all and every aspectual pair to differences depending on some feature of lexical meaning. In Polish literature there are at least two theories concerned with a single distinction: Karolak (1996, 2001) and Bogusławski (2004). In the first one the perfective and the imperfective possess different semantic primes: "something happened" for the perfective and "something is going on" for the imperfective In the second the aspectual distinctions, and in particular the possibility of using the imperfective when the perfective is expected are described in terms of negating some assumptions in terms of generalized conversational implicature, cf. Grice (1975).

In other theories the aspectual distinctions depend on the lexical meaning of the verb. The verbs themselves are either classified according to Vendler (1957) into states, processes, accomplishments and achievements, or other distinctions are made (cf. Grzegorczykowa 1998 and Laskowski 1998). Roughly, for achievements and accomplishments the perfective is the basic form, upon which the imperfective is built. States and processes are primarily imperfective and the perfective sense is added whenever the course of the process or the duration of the state is somehow quantified.

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[1]The literature on the subject is enormous and for the lack of space we will only mention a few of the accounts.

The problem of relations between the so-called aspectual pairs is further complicated by the fact that Polish has two types of morphological formatives for aspectual distinctions. For some pairs the distinction is marked by the difference of appropriate suffix, e.g. *kaszlnąć* (perfective "to give a cough") - *kasłać* (imperfective "to cough (repeatedly)"). For other pairs the distinction is marked by a prefix, e.g. *pisać* (imperfective "to write, to be writing") - *napisać* (perfective "to have written"). To complicate the issue even further, from a single basic (i.e. morphologically simple) imperfective several prefixed perfectives usually derive, with meaning modified by the prefix. Moreover, from these perfectives further secondary Impfs derive through suffix change, e.g. *pisać* → *podpisać* (perfective "to sign") → *podpisywać* (imperfective "to be signing"). Fortunately, only the last two, i.e. *podpisać* - *podpisywać* are considered an aspectual pair.

The two kinds of apparent aspectual pairs have received different treatment in most of the Polish dictionaries, both mono- and bilingual. Pairs distinguished by appropriate suffixes are treated as a double headword for a single entry, whereas pairs where the perfective is marked by a prefix are split into different entries. The only notable difference until now has been the solution adopted by *Słownik współczesnego języka polskiego*, where for verbal entries both kinds of pairs are treated as headwords. Importantly, in order to provide real aspectual pairs, a bare (prefix-less) imperfective may appear as a member of several different aspectual pairs, e.g. *pokierować* (perfective) - *kierować* (imperfective) "to guide"; *skierować* (perfective) - *kierować* (imperfective) "to direct, to refer"; *wykierować* (perfective) - *kierować* (imperfective) "to make sb adopt a profession, attitude, etc."; *kierować* (imperfective tantum) "1. to drive a car"; 2. "to motivate" and *skierować* (perfective) - *skierowywać* (imperfective) "to direct, to refer". All the other dictionaries would have several single headword entries, e.g. *kierować, pokierować, skierować, wykierować*.

This procedure has been followed *PWN–Oxford Polish-English Dictionary*, from which we would like to quote relevant entries to illustrate the point at hand and to show the sense distinctions involved:

> **KIER|OWAĆ** *impf vt* **1.** (ustawiać) to point, to direct; **kierować reflektor w dół** to point the searchlight downwards; … ⇒ **skierować**. **2.** (wysłać) to dispatch, to send *towary*; to refer *pacjenta, chorego, ustawę*; to direct, to (re)route *ruch*; …; **kierować sprawę do sądu** *strona, adwokat, prokurator* to bring a. take a case to court; *policja, sąd niższej instancji* to refer a case to (a higher) court; **kierować pacjenta do specjalisty** to refer a patient to a specialist; …⇒ **skierować**. **3.** (zwracać się) to direct, to aim *słowa, myśli, uczucia*; … ⇒ **skierować**. **4.** (prowadzić) to steer, to drive **(czymś** sth) *samochodem, motocyklem, autobusem*; to navigate, to steer **(czymś** sth) *statkiem, samolotem*. **5.** (zarządzać) to manage, to run **(kimś/czymś** sb/sth); **kierować firmą** to run a. manage a company; … ⇒ **pokierować**. **6.** (wpływać) to control **(kimś** sb); …; **prawo do kierowania własnym losem** the right to run one's own life; … ⇒ **pokierować**. **7.** (powodować) *uczucie, rozsądek* to drive; …**8.** książk. (kształcić) **ojciec kierował go na lekarza** his father was putting him through medical school ⇒ **wykierować**.

> **POKIER|OWAĆ** *pf vt* **1.** (zarządzić) to lead; **nie umiał pokierować swoimi sprawami** he couldn't manage his own affairs; **trzeba było nią pokierować, bo sama nie wiedziała, co robić** she had to be nudged in the right direction, because she didn't know what to do; **pokierował zespołem do jej powrotu** he led the team until her return ⇒ **kierować**. **2.** przest. (skierować w jakąś stronę) **pokierować rzekę w nowe koryto** to reroute a river to a new channel. **3.** przest. (wychować, wykształcić) **pokierowali dzieci na pracowitych, uczciwych ludzi** they raised their children to become hard workers and honest people; …⇒ **kierować.**

> **SKIER|OWAĆ** *pf* — **skier|owywać** *impf vt* **1.** (zwrócić w jakąś stronę) to direct, to point *lunetę, strumień wody*; **skierować broń w stronę przeciwnika** to aim at the enemy; … ⇒ **kierować. 2.** (posłać) to dispatch *pismo*; **skierować projekt ustawy do komisji** to refer the draft of the bill to the committee; **skierować sprawę do sądu** to bring a case to court ⇒ **kierować. 3.** (kazać iść) to direct; **skierować kogoś do kasy** to direct sb to the cash desk; **skierować pacjenta do lekarza specjalisty** to refer a patient to a specialist; **skierować pacjenta do szpitala** to send a patient to hospital; **skierować kogoś w złą**

stronę to misdirect sb ⇒ **kierować. 4.** (adresować) to direct; **skierować pytanie do kogoś** to direct a question to sb; **…** ⇒ **kierować.**

As can be seen, the issue is further complicated by the existence of aspectual triplets. Here the problem is illustrated by an apparent imperfective *skierowywać* which means the same as *kierować* and seems to be just a potential formation. These doublets (of the same aspectual value) are quite numerous and may appear both among the perfectives and among the Impfs. In some cases the doublets are perfectly interchangeable, as in the case of *kaszlnąć, zakasłać* (perfective) vs. *kasłać* (imperfective). However, in other cases the sense of the two perfectives differ, as in *mruknąć* vs. *zamruczeć* (perfective) paired with *mruczeć* (imperfective). While the imperfective covers the senses of *mutter, mumble, hum, purr and growl,* the first perfective would be used in the sense of *mumble* or *mutter* and convey the fact that there is something impolite being actually said, while the second covers all animal and engine senses, and with human subject conveys the idea of bad elocution, and not impoliteness.

It seems safe to consider aspectual matching as a clue to sense division. If for any kind of usage there is a separate opposite aspectual form, e.g. *zamruczeć* vs. *mruknąć* in the example above or the choice between *skierować* and *pokierować* in the *kierować* quote we should assume polysemy. However, many different senses may share the same aspectual counterpart. Moreover, some of the verbs are either perfectiva or imperfectiva tantum, in their entirety or in some senses, as can be seen in the imperfectivum tantum sense of *kierować* "to drive a vehicle".

What has been presented so far seems to point that for the purpose of the Polish FN a verbal lexical unit should correspond to an aspectual pair in a given sense, regardless of the formative (different suffixes or prefix) marking the aspectual distinctions.

The case of aspect: aspectual pairs and frame elements

It is assumed that each interpretative frame possesses a set of frame elements, which can be further divided into core ones and non-core ones. It is also assumed that a lexical unit belonging to a given frame covers implicitly or explicitly the elements; thus the actual example can be glossed by means of stating what is happening to the frame elements. This should also be true for both elements of an aspectual pair, if such pair is treated as a single lexical unit. Nevertheless, that aspectual pairs may differ in terms of whether their meaning brings to the fore the action itself, or the result of this action. In particular, this is true for the so-called telic verbs. However, in the case of stative and processual verbs, other sense distinctions may be involved. These, in turn may be further complicated by the status of frame elements evoked by the perfective and the imperfective The issue concerns a mismatch between the overall distinction of core and non-core elements of the frame and the meaning of the perfective aspect for verbs denoting states and processes. In the normal course of events the frame element referring to time is a non-core one. This can be easily seen in an example:

Siedział (imperfective) w bibliotece, studiując rękopisy.

"He was sitting/sat (imperfective) in the library, poring over the manuscripts".

This example can be further fleshed out in Polish to read:

Siedział w bibliotece dwie godziny, studiując rękopisy.

"He sat in the library for two hours, poring over the manuscripts".

Since verbs denoting processes regularly imply duration, we would like to assume that the element DURATION is a non-core, default element of the frame for such verbs. Further arguments in favor of the non-core character of the DURATION element can be found when the situation of sitting in the library is used as a background for another event, e.g.:

Siedział w bibliotece, studiując rękopisy, gdy nagle zdał sobie sprawę, że powinien już jechać na lotnisko.

"He was sitting in the library, poring over the manuscripts, when suddenly he realized that he should be on his way to the airport".

However, when the verb in the main clause appears in the perfective the duration is brought to the fore, e.g.:

> Posiedział w bibliotece przez dwie godziny, studiując rękopisy.
>
> "He sat in the library for two hours, poring over the manuscripts".

Moreover, for the verb *siedzieć* another aspectual pair can be found, namely *przesiedzieć* 'to sit through'. In sentences with *przesiedzieć,* the DURATION element is the syntactical direct object:

> Przesiedział w bibliotece dwie godziny, studiując rękopisy.
>
> "He sat for two hours in the library, poring over the manuscripts".

This is but one of many examples that prove that aspect affects the clause structure (cf. Holvoet 1991:15–28). More evident and well known examples are provided by the possibility of construing an absolute usage with the imperfective only, e.g.

> Czytał w pokoju.
>
> "He was reading in his room".
>
> vs.
>
> Przeczytał w pokoju.

which is acceptable with a tacit direct object, i.e. "He read it in his room" and completely unacceptable in the absolute sense "He read in his room".

Conclusion

What we have observed so far suggests that it might be premature to posit an aspectual pair as a single lexical unit for the purpose of the description within the FN. On the other hand, we are not denying that actual analyses may prove, our doubts notwithstanding, that a lexical unit for Polish is comprised of such a pair. Nevertheless we feel that making such assumption may bias the description we envisage.

Bearing that in mind we decided that for our sample of verbs, mentioned above, each member of the aspectual pair will be initially described as a separate unit. However, our collaborators will be asked to work simultaneously on a pair and/or triplet.

Once the respective frames and frame elements for each perfective and imperfective verb member of an aspectual pair are established independently, the two putative frames will be compared, to see if they can be conflated into a single frame. Should that be the case, it could be then argued that the aspectual pair constitute a single lexical unit, comparable with lexical units described for other languages, and thus be made use of in the attempts to provide a contrastive lexicographical and semantic description and semantic and translational equivalence, cf. Boas (2002).

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