THE COMPLEMENTS OF PERCEPTION VERBS IN ENGLISH AND POLISH A SYNTACTO-SEMANTIC ANALYSIS

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In this paper I would like to analyze perception verb complements (henceforth PVC) in English and Polish within the framework of Chomsky's "core grammar" presented in Chomsky (1981) and the method of syntactic analysis developed in Kopytko (1985 and 1986).

First I intend to summarize briefly the main points of the two articles mentioned above and then proceed with an analysis of selected English data and their Polish equivalents and to end the paper with conclusions and implications for contrastive linguistics.

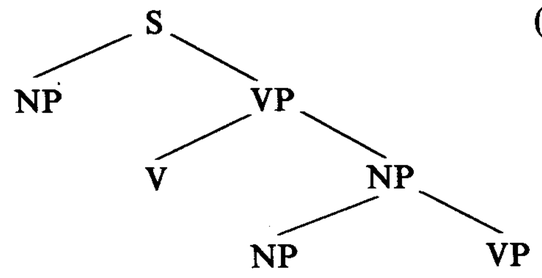
1. In Kopytko (1986b) I identified two different approaches to syntactic analysis within the framework of autonomous syntax. The first one based on arguments from syntactic constituent structure tests and arguments from overall simplicity of the statement of transformational rules as exhibited in Akmajian (1977), and the second developed by Chomsky (1981) in his theory of "core grammar" (including GB-theory, i.e. government and binding) which resorts to the fundamental principles of UG (i.e. universal grammar).

In addition to Gee's (1977) critique of Akmajian's analysis of PVSs in terms of constituent structure tests I pointed to some other weak aspects of this approach.

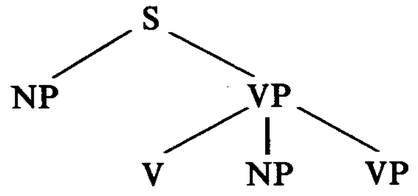
Firstly, Akmajian's claims that the structures proposed for gerundial PVCs and infinitival PVCs of the sentences in **a** and **b** represented as A and B respectively:

(a) I saw the moon *rising* over the mountain.
(b) I saw the moon *rise* over the mountain.

(A)



(B)



are supported by semantic facts (i.e. the difference of meaning between them is expressed by the difference in syntactic structure) does not seem to be well-justified in this case. The difference between the sentences in ***a*** and ***b*** lies in the aspect of the verb *rise*. In ***a*** the category of aspect has to be marked as incomplete, in ***b*** as complete. Thus, the semantic feature [± complete] of the aspectual category will in a natural way explain the difference between the discussed sentences. Unfortunately, Akmajian does not establish any necessary correlation between the semantic feature [− complete] and the PS-rule NP → NP VP or the semantic feature [+ complete] and the PS-rule VP → V NP VP. The introduction of those rules into the base complicates the categorial component to a considerable degree. This fact is also in conflict with Wassu's (1977) distinction between lexical rules and transformations, as well as with some basic assumptions of "core grammar".

Secondly, it seems that syntactic analysis in terms of constituent structure tests has a serious methodological defect, namely, it operates on derived structures, i.e. usually surface structures; (for more detail cf. Kopytko 1986).

Thirdly, the class of verbs analyzed as requiring PVCs is a heterogeneous one. It consists of the verbs of perception (*see*, *hear*, *feel*, etc.) as well as such verbs as *find*, *discover*, *catch*, *tape*, *film* and some others.

Fourthly, a logical error is involved in the constituent structure tests approach, which is connected with the fallacy of the following proposition: If X behaves as Y than X is Y.

Fifthly, due to the paucity of data the syntactic analysis in terms of constituent structure tests would be inconclusive and unjustified.

In Kopytko (1986) I argued for the NP-$\bar{S}$ with a zero complementizer structure for PVCs in Middle English as in the sentence in *a* analyzed as A:

(a) He herde hem speke.
(A) He INFL $[_{VP}$ herde $[_{NP}$ hem $[_{\bar{S}}[_{S}$ PRO $[_{VP}$ speke]]]]]

In Kopytko (1985) I claimed that PVCs in Modern English exibit the same i.e. NP-$\bar{S}$ structure as their ME equivalents. There is no direct evidence for the structure V-NP-$\bar{S}$ for PVCs in Modern English. However, there is some attested evidence in ME indicating that the subcategorization rule *see* — NP — $\bar{S}$ was present in the lexicon of ME as in the sentence below:

(b) Egipciens sawen *the woman that she was ful fayre.*
(382 Wycilf Gen. 12)

analyzed as follows:
(B) Egipciens INFL $[_{VP}$ see $[_{NP}$ the woman] $[_{\bar{S}}$ that $[_{S}$ she was ful fayre]]]

If we accept Chomsky's *projection principle* of UG claiming that representations at each syntactic level (i.e. LF, (logical form), D- and S-structure) are projected from the lexicon, in that they observe the subcategorization properties of lexical items the sentences in (d) can be claimed to be derived from clausal complements on the basis of the above mentioned principle:

(c) I sough him wirche.
(d) He hurde engles singe an hey.

They will be analyzed as in (A) above exhibiting the NP-$\bar{S}$ with zero complementizer structure. In Modern English, however, the projection principle has no synchronic data to operate on. As a result the structure of the infinitival complementation cannot be projected from that of the clausal complementation. Our hypothesis is that LF representation, D- and S-structure for Modern English PVCs are equivalent to those of Middle English by virtue of DPP i.e. *diachronic projection principle*. DPP projects the D-, S- and LF representation (in this case of ME PVCs on their equivalents in Modern English to assign them proper structure at those levels (i.e. identical with that of ME)). There are two conditions which constrain the operation of the DPP. The two syntactic structures involved in the process of projection should be 1) identical in LF-representation, 2) identical in S-structure as in the sentences below:

(e) (ME) He herde hem speke.
He heard them speak.

The hypothesis of DPP and its usefulness for syntactic analysis can be called into question if conclusive evidence could be demonstrated for the claim that the sentence in (e) above derive from different syntactic sources. (For more detail cf. Kopytko 1985).

2. The verbs of perception form a subclass of the verbs of sensory cognition (henceforth: VSC) that include verbs referring to the five senses employed in the process of human sensory cognition (i.e. sight, hearing, smell, touch and taste). That subclass consists of the following lexical items: *see*, *hear*, *smell*, *feel*, and *taste*. In Kopytko (1986a) I referred to the discussed subclass of VSC as resultative VSC. The reason for that was my attempt to account for the difference in meaning between the following sentences:

(a) I saw a little red house; vs. I looked at a little red house. The use of verbs *see* in the first sentence implies that the non-intentional act of perception (which may be represented by the sense-component [± Intent]) was cognitively successful by producing a result [± Result] i.e. a perception or image of the object of perception in the mind of the speaker-perceiver. In the case of the second sentence the result of the act of perception is irrelevant.

Accordingly, the two terms, i.e. verbs of perception and resultative VSC, are terminological equivalents referring to the same class of verbs specified above. I shall use the first term throughout this paper.

To analyze the meanings of particular classes of VSC (in Kopytko 1983, 1986a) I postulate the formulation of SRs i.e. semantic representations in terms of parameters characteristic of human sensory cognition as follows:

1) MANNER of PERCEPTION characterized by [± ACTIVE] or [± INTENSIVE]
2) RESULT (SUCCESS) of PERCEPTION characterized by the feature [± RESULT]
3) VOLITION of PERCEPTION characterized by the feature [± INTENT]
4) STATE of AFFAIRS EXHIBITED by the OBJECT of PERCEPTION [± STATE]

Accordingly, the SR of the following verbs: *see, hear, feel, taste, smell* may be represented as follows:

VERBS of PERCEPTION

$$\begin{bmatrix} \text{X SENSES Y} \\ + \text{ RESULT} \\ - \text{ INTENT} \\ - \text{ ACTIVE} \\ \ldots\ldots\ldots \end{bmatrix}$$

As I shall present below the semantic features of the verbs under analysis will have their syntactic consequences i.e. they will determine certain syntactic structures and rule out others as ungrammatical.

2.1. The most intriguing aspect of PVCs in English is the infinitival and participial complementation, which will be discussed in turn below.

The sentences in (1) illustrate the infinitival complementation by means of the "naked infinitives", (for an account of the syntactic reasons for the existence of the "naked infinitives" in English cf. (Kopytko 1985)):

(1) (a) I saw him go out.
(b) I heard her sing all night.
(c) They noticed the boy run across the street.
(d) She felt something tickle her ear.

The syntactic structure of PVCs as presented above, on the basis of diachronic evidence, is the following: V-NP-$\bar{S}$. The Polish equivalents of the sentences in (1) manifest overtly the same syntactic structure i.e. V-NP-$\bar{S}$.

(2) (a) Widziałem, {że / jak} wyszedł.
(b) Słyszałem, {że / jak} śpiewała całą noc.
(c) Zauważyli, {że / jak} chłopiec przebiegł przez ulicę.
(d) Poczuła, {że / jak} coś załaskotało ją w ucho.

As can be seen the Polish PVCs are *że/jak* clauses (i.e. *that/how* clauses respectively).
In English PVCs *that/how* clauses are ungrammatical as in the sentences in (3):

(3) (a)* I saw him {that / how} he {go out / went out}
(b)* I heard her {that / how} she {sing / sang} all night.

Viewed semantically, *że/jak* clauses in Polish represent the statement of a fact that was accomplished by the object of perception (cf. the sentences in (2) above). As in the case of their English equivalents the Polish sentences in (2) are aspectually complete (i.e. the Polish verbs are marked for the perfective aspect). Therefore, from now on I shall refer to them, semantically, as *factitive accomplished* clauses (henceforth: FA clauses). The clauses representing an incomplete event marked aspectually as [− complete] as in *I saw him going out*, where the infinitive is replaced by the present participle shall be referred to as *factitive-durative* clauses (henceforth: FD clauses). The question of the semantic difference between *że* and *jak* clauses in Polish will be presented below.

(1) (a) rewritten here as (4) may be rendered in Polish as (a-d) i.e. four semantically equivalent syntactic structures:

(4) I saw him go out.
(a) Widziałem, że /jak wyszedł.
(b) Widziałem go, że/jak wyszedł.
(c) Widziałem, że/jak on wyszedł.
(d) Widziałem go, że/jak on wyszedł.
(e) *Widziałem go wyjść.

The infinitival complementation in (4) (e) is in Polish clearly ungrammatical. The sentence in (b) is contradiction to that in (a) which possesses an overt (surface), in Polish redundant, pronoun as object in the matrix sentence. In (c) the surface pronoun functions as the subject of the embedded clause. Finally, in (d) both pronouns appear in the S-structure.

The structure in (b) seems to match perfectly the one I proposed for the infinitival complementation in English. Thus, (4) and (4) (b) can be represented, respectively, as follows:

(5) (a) I saw $[_{NP}$him $[_{\bar{S}}$that $[_{S}$PRO $[_{VP}$go out$]]]$
(b) Widziałem $[_{NP}$go $[_{\bar{S}}$że/jak $[_{S}$PRO $[_{VP}$wyszedł$]]]$

In English i.e. (5) (a) *that*-complementizer is obligatorily deleted in the S-structure. As I have pointed out above, it was not necessarily so in ME.

The sentences in (b) represent the participial complementation in English:

(6) (a) I saw him going out.
(b) I heard her crying.
(c) They noticed them stealing the car.
(d) She felt something tickling her ear.

Polish semantic equivalents of the sentences in (6) are the following:

(7) (a) Widziałem, $\left\{\begin{matrix}\text{że}\\ \text{jak}\end{matrix}\right\}$ wychodził.
(b) Słyszałem, $\left\{\begin{matrix}\text{że}\\ \text{jak}\end{matrix}\right\}$ płakała.
(c) Zauważyli, $\left\{\begin{matrix}\text{że}\\ \text{jak}\end{matrix}\right\}$ kradł ten samochód.
(d) Czuł, $\left\{\begin{matrix}\text{że}\\ \text{jak}\end{matrix}\right\}$ coś łaskotało ją w ucho.

As in the case of the infinitival complementation the participial equivalent in Polish constitutes *że/jak* clause, semantically the FD clause.

The syntactic structure of (7) (a) is identical to those of (5) (a and b):

(8) Widziałem PRO_1 $[_{\bar{S}}$że/jak $[_{S}PRO_1$ $[_{VP}$wychodził$]]]$
which is derived from:
(9) Widziałem $[_{NP}$go $[_{\bar{S}}$Comp $[_{S}$on INFL $[_{VP}$wyjść$]]]]$

The inflectional morphemes of tense and aspect will produce the required verbal form in VP i.e. *wychodził*; *że* or *jak* will be introduced into Comp position; and the coreferential pronouns may be optionally deleted as in (7) (a).

It seems that the structure in (9) also underlies the sentences in (6). Accordingly, (6) (a) may be represented as follows:

(10) I saw $[_{NP}$him $[_{\bar{S}}$that $[_{S}$PRO INFL $[_{VP}$go out$]]]$

After deleting the complementizer and attaching proper inflectional morphemes to the verb (marked for tense and aspect) the following structure is arrived at:

(11) I saw $[_{NP}$him $[_{\bar{S}}$ $[_{S}$PRO $[_{VP}$going out]]]

The English participial complements can be rendered in Polish by four, semantically equivalent, syntactic structures (as was the case with the infinitival complementation). Thus, (6) (a) rewritten here as (12) possesses in Polish the following syntactic variants:

(12) I saw him going out.
(a) Widziałem, $\left\{\begin{matrix}\text{że}\\ \text{jak}\end{matrix}\right\}$ wychodził.
(b) Widziałem go, $\left\{\begin{matrix}\text{że}\\ \text{jak}\end{matrix}\right\}$ wychodził.
(c) Widziałem, $\left\{\begin{matrix}\text{że}\\ \text{jak}\end{matrix}\right\}$ on wychodził.
(d) Widziałem go, $\left\{\begin{matrix}\text{że}\\ \text{jak}\end{matrix}\right\}$ on wychodził.

It is interesting to note that in questions and negations the complementizer *że* in Polish becomes *żeby* s in the following sentences:

(13) (a) Have you ever heard him tell a lie?
(b) Czy słyszałeś, *żeby* kiedykolwiek skłamał?
(14) (a) I have never seen her smiling.
(b) Nigdy nie widziałem, *żeby* się uśmiechała.

The use of *żeby* instead of *że* in negative and interrogative sentences changes the semantic focus of the indicative *że* from the stress on the factitive meaning of the embedded sentence to the idea of fulfillment of the fact in PVC both in FA and FD clauses. The PVC in (12) may be also rendered in Polish by a present participle focusing the semantic information on the duration of the activity represented by the complement clause as in (13):

(13) I saw him *going* out of his house.
(a) Widziałem go *wychodzącego* ze swojego domu.
(b)* Widziałem wychodzącego ze swojego domu.

(c)* Widziałem wychodzącego go ze swojego domu.
(d)* Widziałem go wychodzącego go ze swojego domu.

The syntactically correct structure is (13) (a) with a surface pronoun in the object position of the matrix sentence. The sentence in (13) (b), although grammatical, is semantically deviant due to the absence of a clearly specified referent. The structures in (c) and (d) are ill-formed syntactically.

2.2. The next type of PVC that I would like to deal with is the past participle complementation illustrated in (14):

(14) (a) I saw him *killed.*
(b) I have often seen it *done.*
(c) Have you ever heard Polish *spoken*?
(d) Have you ever seen a man *tortured*?

Polish semantic equivalents of the sentences in (14) shall be presented in turn below.

(15) I saw him *killed.*

(a) Widziałem, {że / jak} go zabito.

(b)* Widziałem go, {że / jak} go zabito.

(c)* Widziałem go, {że / jak} zabito.

(d)* Widziałem, {że / jak} zabito.

As can be seen *że/jak* clauses in (a) and *jak*-clause in (b) are grammatical structures in Polish; the remaining sentences are clearly ungrammatical. In this construction Polish requires an impersonal form of the verb in the complement as an equivalent of the English past participle. As in the case of the infinitival and participial (i.e. present participle in the FD-clauses) the English construction with past participle as PVC requires as an equivalent (in Polish) *że/jak* clause. Similarly, in the case of (14) (b) rewritten here as (15):

(15) I have often seen it *done.*

(a) Często widziałem, {że / jak} to robiono.

(b)* Często widziałem to, {że / jak} to robiono.

(c)* Często widziałem to, {że / jak} robiono.

(d)* Często widziałem, {że / jak} robiono.

The difference between the sentences in (14) and (15) is in (15) (b) where both clausal complements are ungrammatical. Due, probably, to the impersonal character of the pronoun in the matrix clause. Interesting cases to consider are the sentences in (16) and (17) below:

(16) Have you ever heard Polish *spoken*?

(a) Czy kiedykolwiek słyszałeś, {*że / *żeby / jak} mówiono po polsku?

(17) Have you ever seen a man tortured?

(a) Czy kiedykolwiek widziałeś, {*że / *żeby / jak} torturowano człowieka?

The syntactically correct structures in (16) and (17) are *jak* clauses referring semantically to the manner of performing the activity in PVC. Polański (1967:131) considers *jak*-clauses to be embedded questions functioning as complements of intentional sentences. (In this paper I refer to Polański's intentional sentences as factitive sentences). For obvious reasons, the indicative *że*-clause is ungrammatical in interrogative sentences (16) and (17). The structures with *żeby*-clauses are semantically deviant due to their focus on the fulfillment of the activity rather than on the manner of performing the activity required in the discussed examples.

The indicative forms of the sentences in (16) and (17) shall take both *że* and *jak* clauses in Complements as in (18):

(18) I have heard Polish *spoken* during the morning session.

(a) Słyszałem, {że / jak} mówiono po polsku w czasie porannego posiedzenia.

2.3. In the class of verbs under analysis including *see, hear, feel, smell* and *taste* there are three which seem to exhibit a specific syntacto-semantic behaviour as in the following sentences:

(18) (a) The soup *tastes* sour.
(b) Your hands *feel* cold.
(c) The flowers *smell* nice.

The sub-class of verbs discussed so far i.e. *hear, see* and *feel* has been represented semantically as (19) (a), for the verbs in (18) I propose (19) (b) as their semantic representation:

(19) (a) $\begin{bmatrix} \text{X SENSES Y} \\ +\ \text{RESULT} \\ -\text{INTENT} \\ -\text{ACTIVE} \\ -\text{STATE} \end{bmatrix}$ (b) $\begin{bmatrix} \text{X SENSES Y} \\ +\text{RESULT} \\ -\text{INTENT} \\ -\text{ACTIVE} \\ +\text{STATE} \end{bmatrix}$

The verbs in (18) represented as (19) (b) are marked positively for the feature [± STATE] characterizing the state of affairs exhibited by the object of perception i.e. the object of perception requires PVCs referring to states not to activities. In Kopytko (1983) In refer to such verbs as Existential Verbs of Sensory Cognition. Syntactically those verbs require adjectival complementation that on the semantic plane expresses the state exhibited by the object of perception.

Polish equivalents of the sentences in (18) are the following:

(20) The soup *tastes* sour.
(a) Ta zupa smakuje kwaśno.
(b) *Ta zupa smakuje kwaśna.
(c) Ta zupa ma kwaśny smak.
(d) Czuję, że ta zupa {jest kwaśna / ma kwaśny smak}
(e) *Czuję, jak ta zupa {jest kwaśna / ma kwaśny smak}

(21) The flowers *smell* nice.
(a) Te kwiaty ładnie pachną.
(b) *Te kwiaty pachną ładnie.
(c) *Czuję, że te kwiaty są ładne.
(d) Czuję, że te kwiaty mają ładny zapach.
(e) *Czuję, jak te kwiaty mają ładny zapach.
(f) Czuję, jak te kwiaty ładnie pachną.

(22) Your hands *feel* cold.
(a) *Twoje ręce czuję zimno.
(b) *Twoje ręce czuję zimny.
(c) Czuję, że masz zimne ręce.
(d) Czuję, że twoje ręce są zimne.
(e) *Czuję, że twoje ręce mają zimny dotyk.
(f) *Czuję, że twoje ręce są zimne w dotyku.

(g)* Czuję, jak twoje ręce są zimne.
(h)* Czuję, jak masz zimne ręce.

As can be seen, syntactically, the analyzed sub-group of verbs in Polish seems to be more complicated than its English equivalents. The main conclusions I can draw on the basis of the data in (20, 21 and 22) are the following: *firstly*, the Polish verbs do not take adjectival complements (cf. (20) (b), (21) (b) and (22) (b)); *secondly*, the verbs *taste* and *smell*, in Polish *smakować* and *wąchać*, require an adverb as complement instead of an adjective (cf. (20) (a) and (21) (a)) on the other hand, *feel*, in Polish *dotykać* requires *że*-clause as a complement (cf. (22) (c) and (22) (d)); *thirdly*, *smakować* and *wąchać* take both the adverbial and clausal complements in contradiction to *dotykać* that takes only the clausal one; *fourthly*, *smakować* takes only *że*-clauses as complements whereas *wąchać* admits both *że* and *jak*-clauses in that function; *fifthly*, all three verbs *smakować, wąchać* i *dotykać* admit of clausal complementation.

An interesting thing to notice is the semantic parallel between the adjectival and *że*-clauses complementation (expressing the meaning in terms of perceived states and properties or qualities) on one hand, and the adverbial and *jak*-clauses complementation expressing the meaning in terms of (from the point of view) the manner of perceiving of the states and qualities of the object of perception on the other; (The latter admitted in Polish but not in English).

On the basis of what I have presented above, I am inclined to claim that the sentences in (20), (21) and (22) represented syntactically in the S-structure as (23):

(23) The soup *tastes* sour.

$[_{NP}$ the soup $[_{VP}$ tastes $[_{S}$ t $[_{AP}$ sour]]]]

derive from structures with clausal complements, in this case V-$\bar{S}$ as represented in (24):

(24) $[NP^{e}]$ $[_{VP}$ tastes $[_{\bar{S}}$ that $[_{S}$ the soup $[_{AP}$ sour]]]]

The application of Move-d and $\bar{S}$-deletion will produce (23) above. In English $\bar{S}$-deletion is obligatory, in Polish it may be optional (cf. the data in 20, 21 and 22). The embedded phrase is a "small clause", i.e. a clausal structure lacking INFL and the copula. $\bar{S}$-deletion is obligatory for "small clauses" as contrasted with infinitives (cf.Chomsky 1981:107). In Polish there is an optional copula in the predicative to produce the sentences in (20) (d) and (22) (d). It seems to me that there is also a copula in the predicative, in English, which is deleted obligatorily in the S-structure.

Admittedly, the V-$\bar{S}$ structure appears in the the S-structure of *see, hear, smell* and *taste* as in the following examples:

(25) (a) I saw *how it was done.*
(b) I heard *how she sang.*
(c) I smelled *how badly it stunk.*
(d) I tasted *how sweet it was.*
(e) I will see *what I can do for you.*
(f) Let us see *who it is.*

For those who accept Chomsky's *projection principle* (cf. Chomsky 1981) the sentences in (25) constitute an independent of the presence of V-$\bar{S}$ structure in the lexicon of perception verbs. It is interesting that verbs of "indirect perception": *see, hear* and *feel* exemplified in (26) also require clausal complementation i.e. V-$\bar{S}$ structure:

(26) (a) I see *that you are in trouble.*
(b) I heard *that she sang worse than ever before.*
(c) I could feel *that she was standing near me.*

The acquisition of the mental state (perception) expressed by the verbs in (26) is not direct but inferred by means of indirect evidence.

I would like to conclude this paper with an analysis of *time*-clauses as PVCs, which I have not presented in previous publications. I shall focus on two basic structures of temporal complementation V/adv/$\bar{S}$ and V NP $\bar{S}$. The sentences in (27) illustrate the former:

(27) (a) She could see *when he did it; not until later did she lose her sight.*
(b) I heard well *before the accident.*
(c) I could *smell* and *taste* better *when I* was younger.

Semantically the verbs of perception in (27) refer to the general ability of perceiving. Polish equivalents of (27) are respectively as follows:

(28) (a) Widziała, $\left\{\begin{matrix}\text{kiedy}\\\text{jak}\end{matrix}\right\}$ on to zrobił; dopiero później straciła wzrok.
(b) Słyszałem dobrze przed wypadkiem.
(c) Miałem lepszy węch i smak $\left\{\begin{matrix}\text{gdy}\\\text{kiedy}\\\text{jak}\end{matrix}\right\}$ byłem młodszy.

As can be seen Polish and English V/adv/$\bar{S}$ structures match precisely. The V/adv/$\bar{S}$ structure in temporal clauses may be taken as an input for the *projection principle.*

The sentences in (29) represent the V NP $\bar{S}$ structure in temporal clauses:

(29) (a) She felt it *when he tickled her ear.*
(b) I heard her *when she sang.*
(c) I saw him *when he went out of his house.*

The same syntactic structure is exhibited by Polish equivalents of (29):

(30) (a) Poczuła, $\left\{\begin{matrix}\text{kiedy}\\\text{jak}\end{matrix}\right\}$ połaskotał ją w ucho.
(b) Słyszałem ją, $\left\{\begin{matrix}\text{kiedy}\\\text{jak}\end{matrix}\right\}$ śpiewała.
(c) Zobaczyłem go, $\left\{\begin{matrix}\text{kiedy}\\\text{jak}\end{matrix}\right\}$ wyszedł ze swojego domu.

Czuć, the Polish equivalent of *feel* in (30) (a) does not require a surface object in the matrix sentence.

2.4. Methodologically, the most intriguing problem connected with the temporal complementation of PVCs is the operation of Chomsky's *projection principle.* By *projection principle* the role of the categorial component of the base is reduced to minimum because representations at each syntactic level (i.e. LF, D – and S – structure) are projected from the lexicon, observing the subcategorization properties of lexical items.

If one adheres to such a strong version of the *projection principle* (unrestricted semantically) one has to admit on the basis of the sentences in (29), that V NP $\bar{S}$ structure is present in the subcategorization rules of perception verbs and may be used as an input for the operation of the *projection principle.* That is, the V NP $\bar{S}$ structure that I proposed for the D-structure of PVCs (i.e. infinitival and participial) on the basis of historical and contrastive evidence is also confirmed by the *projection principle*, a principle of UG; or; or rather the other way round, the validity of the *projection principle* is corroborated by an independent diachronic and contrastive (Polish-English) evidence.

To recapitulate the main points again. The analyzed types of complementation (in PVCs) are reducible to clausal complementation of two basic structures (a) V /adv/$\bar{S}$ and (b) V NP $\bar{S}$ (both in English and Polish). The adduced diachronic and contrastive evidence as well as a principle of UG seem to support the claim (above). In Polish the structures in (a) and (b) represent both the D- as well as S-structures in all the discussed PVCs. In English the structures in (a) and (b) represent mainly the D-structure realized on the surface by the infinitival, participial (both present and past) and adjectival complements, although they sometimes appear in the S-structure as well (cf. (25), (26), (27) and (29) above). The main theoretical question that

should be raised in connection with the present paper is the status of contrastive analysis as evidence in the syntactic argumentation. As the above presented contrastive analysis of PVCs in English and Polish seems to indicate all types of complementation are reducible to (or derivable) from a universal base (which is in agreement with the major claims of a grammar (e.g. Chomsky's 'core grammar')) theoretically based on the linguistic universals and principles of UG. The analysis I have presented here emphasizes the D-structure similarities of contrasted languages, expressed in universal terms. It seems that syntactic analysis should rely (and require) at least three types of arguments:
1) from the principles of UG, 2) from dischronic evidence, and 3) from contrastive evidence. Both diachronic and contrasttive evidence may be considered as independent evidence supporting and corroborating the claims of UG.

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