

SEMANTIC PROBLEMS WITH "LEFT" AND "RIGHT"

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In the infinite class of prenominal modifiers adjectives *left* and *right* constitute a pair which merits attention because of its exceptional semantics reflecting the way in which human beings perceive reality and organize their conceptions of space¹. Challenging problems arise when a semantic description of NP's containing adjectives *left* and *right* is attempted. The aim of this paper is to examine some aspects of the semantics of these two adjectives on the basis of the language data from English and Polish. It is assumed that a close link between syntax and semantics exists and that semantic properties of NP's containing adjectives *left* and *right* influence linguistic behaviour of these NP's.

Syntactically, prenominal adjectives *left* and *right* have been described as belonging to the class of non-copulative and not denominal adjectives whose derivation constitutes a problem for Chomskyan analysis of attributive adjectives, since they do not have grammatical sources being prohibited in predicative position. NP's containing these adjectives such as *the right side* in English and the corresponding *die rechte Seite* in German were quoted by Winter (1965:485-6) as examples of exclusively attributive adjectives and counterevidence to adopting Chomsky's proposal for other languages as well as for English. In Polish, adjectives *lewy* (left) and *prawy* (right) cannot appear in predicative position in simple statements but they are acceptable in the predicates of direct and reported questions, cf.:

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<i>Polish</i>	<i>English</i>
1. prawa strona	right side
a. * Ta strona materiału jest prawa	* This side of the material is right.
b. Która strona materiału jest prawa?	* Which side of the material is right?
c. Jaśniejszy kolor wskaże pani, która strona jest prawa.	* This lighter colour will tell you which side is right.
2. lewa narta	* the left ski
a. * Ta narta jest lewa.	* This ski is left.
b. Która narta jest lewa a która prawa?	* Which ski is left and which is right?
c. Przy pomocy oznaczeń "L" i "P" można poznać, która narta jest lewa, a która prawa.	* By means of the letter marks "L" and "R" one can tell which ski is left and which is right.

Both in Polish and English, however, adjectives *left* and *right* cannot be modified by means of "very" nor can they be used in structures of comparison, which follows from the semantics of these adjectives, cf.:

3. * a very left hand — * bardzo lewa ręka
4. * Is this glove more right than left?
* Czy ta rękawiczka jest bardziej prawa niż lewa?

Semantically, adjectives *left* and *right* are usually classed together with other "spatial" adjectives such as *wide*, *long*, *tall*, etc. (the term "spatial" adjectives being introduced by Bierwisch (1967:11), which are used to describe the position and orientation in space of the objects referred to by the nouns they modify. Bierwisch mentions the fact that spatial adjectives are syntagmatic, i.e., that they do not have autonomous meaning when considered in isolation. It will be observed in this paper that even the meaning of full NP's containing prenominal *left/right* adjective and a head noun often cannot be determined without reference to external factors such as the position of some other objects or that of the speaker at the time of the speech act. Adjectives *left* and *right* seem to present semantic problems which cannot be solved without recourse to semantic pragmatics.

When considered from the point of view of their referents in reality, NP's containing prenominal adjectives *left* or *right* fall into two distinct groups:

- a. a group of NP's denoting objects permanently oriented which can be considered in isolation and will always be recognized as either left or right, e.g. *a left glove*, *a left-hand screw*, etc.
- b. a group of NP's denoting objects which are not permanently oriented, i.e., they do not possess any inherent feature in their structure that would make it possible to mark them unanimously as either left or right when

they are considered in isolation. These objects are described as *left* or *right* only with respect to some plane of reference provided by other objects or human beings definitely oriented towards the objects in question at the time of the speech act, e.g. *the left side of a street*, *the left windscreen wiper of a car*, etc.

Objects denoted by NP's of group a) are different in nature from objects denoted by NP's of group b). They can be thought of as single entities, existing by themselves, because in their shape they possess some inherent feature which makes it possible to define them as *left* or *right* without necessarily relating them to other objects, and they cannot lose or change their property of being left or right. E.g., a left glove will never become a right glove and will always be referred to as *left*, even if it is put on the right hand, whereas an object such as a left wheel of the car will be called *a right wheel* when it changes its position in space through being fixed on the right side of the car, although physically, it will remain the same object. Objects denoted by NP's of group b) do not have any inherent property that would mark them as uniquely *left* or *right*; they acquire their left or right status when their position is fixed with respect to some external plane of reference. A windscreen wiper becomes left or right when it is fixed to the car, a drawer becomes left or right when it is put into a desk with two sets of drawers; even such common expression as *the left eye* has meaning only when understood as a part of a human face with the nose providing the vertical orientation and the necessary plane of reference. (In a description of a modern painting representing a human face with two or more eyes painted on one side of the nose one would speak of two left or two right eyes).

The difference between the two kinds of objects denoted by NP's containing adjectives *left* and *right* finds a linguistic manifestation in English and in Polish. Cf. the behaviour of these NP's in sentences a) and b) in the following set of examples:

5. a) I have found *some/a left shoe*.
Znalazłem *jakiś lewy but*².
- b) *I have found *some/a left wheel*.
*Znalazłem *jakiś lewe koło*.
6. a) What does *a left glove* look like?
Jak wygląda *lewa rękawiczka*?
- b) *What does *a left sock* look like?
*Jak wygląda *lewa skarpetka*?
7. a) Draw *a left hand*.
Narysuj *lewą rękę*.

² The figurative meaning of *lewy* as *not good* is disregarded in this part of the paper.

- b) *Draw a left stocking.
*Narysuj lewą pończochę.
8. a) *A right shoe and a left shoe are identical.
*Prawy but i lewy but są jednakowe.
- b) A right drawer and a left drawer are identical.
Prawa szuflada i lewa szuflada są jednakowe.

In examples 5–7 sentences b) are definitely unacceptable whereas sentences a) are grammatical; in 8, sentence a) is false and sentence b) is true. Example 5 b) is ungrammatical because *a left wheel* does not have a referent in reality; the question in 6 b) cannot be answered because a specific description of an object called *a left sock* cannot be given, so this sentence does not make sense in a conversation. Similarly, the order given in 7 b) cannot be carried out for isolated objects such as left stockings do not exist and cannot be easily imagined since in our reality all stockings of a given size are identical. (Whereas shoes and gloves are sold only in pairs, one can buy more than two stockings of a given size — usually three are sold at a time³). We speak of left wheels, socks, stockings or drawers when the existence of corresponding right wheels, socks, stockings or drawers is presupposed, and it is clearly not presupposed in sentences 5–7. Objects denoted by NP's in examples a) of these sentences (a left glove, a left hand, a left sock) can be thought of as isolated entities and the existence of the corresponding right objects of their kind does not have to be presupposed when these NP's are used in English or Polish sentences

* It may be noticed, however, that language users seem to assume, against common practice of buying more than two stockings at a time, that these articles are pairs, and the expressions *a pair of stockings* and the corresponding *para pończoch* are commonly used in English and in Polish. This fact can be explained as an unconscious use of analogy to "logical" NP's such as *a pair of shoes, a pair of gloves, a pair of slippers*, etc. Another interesting fact may be mentioned at this point: in most cases both in English and in Polish, the noun *pair* is used in reference to articles of clothing for various symmetrical body parts but not in reference to these body parts themselves (except in some figurative meanings), cf.:

a) a pair of shoes	— para butów
socks	skarpet
stockings	pończoch
gloves	rękawiczek
b) * a pair of feet	— * para stóp
legs	nóg
hands	rąk
cars	uszu (except in literary phrases such as <i>para nóg do tańca</i> <i>para rąk do pracy</i>)

since single objects such as the left glove of example 5 a) will always have references in reality⁴.

Another linguistic observation reflecting the difference between objects denoted by NP's of group a) and those denoted by NP's of group b) can be made at this point. NP's of group a) have the structure Adj-N, whereas NP's of group b) usually contain structures of modification to accompany Adj-N phrases. In English they are most frequently *of*-NP structures of modification, in Polish — nominal modifiers in the Genitive case. Cf.:

9. Adj-N + a structure of modification

the left windscreen wiper of a car	— lewa wycieraczka samochodu
a left drawer of a desk	— lewa szuflada biurka
the left arm of an armchair	— lewa poręcz fotela
the left wall of a room	— lewa ściana pokoju
the left bank of a river	— lewy brzeg rzeki

10. Adj-N + Ø

a left shoe	— lewy but
a left hand	— lewa ręka
a left boot	— lewy "kozak"
a left car	— lewe ucho

It should be further observed that the noun in the structures of modification refers to a definite object in reality (whether specific or understood as a representative of a class of objects), and therefore it is often preceded by the definite article, a possessive pronoun with a definite deictic function or a proper noun in the Genitive in English. The English *of*-NP structures under consideration cannot be translated into Polish by means of a post-nominal adjective. The NP **a left wheel of a car* and its Polish equivalent **lewe koło samochodowe* are unacceptable because the structure of modification here describes a type of wheel, suitable for a car, and the NP does not presuppose the existence, of a definite car the left wheel in question could be a part of. The impossibility of the post-adjectival translation into Polish of the *of*-NP phrases here as well as the lack of NP's such as **a left car wheel* in English seem to argue for the necessary definiteness of the terms used in the structures of modification accompanying *left/right-N* phrases under discussion. The NP's *one of the left wheels of John's car* and the corresponding *któreś lewe koło samochodu Jana* are acceptable since they have a definite re-

⁴ Fillmore (1968:63) mentions an interesting case reported by Lévy-Bruhl of a language in which there is a clear referential and grammatical distinction between NP's *a left hand* and *a hand*. The former denotes the part of human body whereas the latter does not. This semantic difference is manifested in different grammatical functions of the two expressions.

ferent in reality because the presence of the proper name *John* restricts the denotation of the whole expression to one concrete object.

Objects denoted by the nouns in the structures of modification accompanying NP's of group b) provide the necessary plane of reference with respect to which objects referred to by the head nouns of the NP's in question can be described as *left* or *right*. No reference to objects other than those denoted by the head nouns is necessary in a semantic description of NP's of group a). Besides this referential difference there seems to be an important physical difference concerning the shape of objects denoted by the head nouns of the NP's of the two groups. Objects denoted by NP's of group a) are irregular in shape, i.e., they do not have an axis or a plane of symmetry of their own, whereas objects referred to by the head nouns of NP's of group b) are very regular in their shape and in geometrical terms can be defined as symmetrical since they possess an axis or plane of symmetry of their own. Taking these physical features of structure into consideration as a criterion, objects denoted by NP's of group a) can be defined as a subset A of all objects which can be referred to as *left* or *right*, such that the elements of A possess in their shape an inherent and permanent property which can unanimously mark them as *left* or *right*. The meaning of adjectives *left* and *right* used to describe NP's which denote elements of A (e.g. a left glove) can be defined in terms of logic as the property of being left or right. Objects denoted by NP's of group b) cannot be described as inherently *left* or *right* because of the geometrical regularity in their shape. Adjectives *left* and *right* in these NP's do not define a property of the objects denoted by the head nouns of these NP's. Their meaning depends on the presence of some other objects with respect to which objects denoted by the head nouns in question can be characterized as left or right, i.e., can be described as left or right oriented in space. Their semantic function is not to describe the object denoted by the following noun but to orient this object in space with respect to a plane reference outside it. All *left* and *right* adjectives which are not used to specify elements of the set A have this orientative function.

Since the function of adjectives *left* and *right* is clearly different in the two groups of NP's discussed so far, I would like to suggest in this paper that there are two kinds of the *left/right* adjectives: the specifying and the orientative type. To account for the distinctions between them the lexicon of English and Polish should provide double semantic entries for the pair *left* and *right* and the grammars of these two languages should consider semantic and syntactic differences between NP's containing adjectives *left* and *right* of one or the other type.

To my knowledge, only two proposals concerning a semantic treatment of adjectives *left* and *right* in the grammar have been advanced so far: one by Bierwisch (1967) and the other by Fillmore (1971), both very tentative

and general. Neither of the two linguists considered the distinction between the two types of the *left/right* adjectives made in this paper. Bierwisch proposed a description of the features of some spatial adjectives from German in terms of a system of universal semantics markers. His approach was a continuation and development of the interpretive type of semantics proposed by Katz and Postal has been since much criticized. (1964) whose theory (David Lewis (1972:169) sums up current opinions on the Katzian method of semantic interpretation by calling Katz and Postal conception of semantic markers "nothing more than a translation into the auxiliary language of Semantic Markers"). Bierwisch's system of universal semantic markers for orientative features of spatial adjectives turned out to be extremely complicated and inadequate, and that may be the reason why the work he started in this field has never been successfully developed. In 1971 Charles Fillmore returned to Bierwisch's proposal for handling semantic implications of spatial adjectives in terms of features and suggested that the features connected with the dimensionality and orientation of objects in space should be stated in the lexicon as information provided by spatial adjectives such as *wide*, *tall*, *left*. In his proposal orientative features should be incorporated into the presuppositional component of the lexical entries for spatial adjectives, cf.:

"Uses of the word *wide* presuppose that the object being referred to has at least one (typically) horizontal dimension; and that the dimension which this word is used to quantify or describe is either the main left-to-right extent of the object as human beings conceive their orientation to it, if that is fixed, or it is the shorter of the two horizontal dimensions. The adjectives *tall* and *short* (in one sense) presuppose, as *high* and *low* do not, that the object spoken about is vertically oriented and is in contact with, or is a projection out of, the ground". (Fillmore 1971: 384).

Unfortunately, Fillmore did not discuss the question of lexical presupposition in much detail and no more spatial adjective examples were considered in his paper.

With *left* and *right* a specification of their presuppositional component is more complicated than with adjectives like *wide* and *tall*. First of all, it is more difficult to define the object "being referred to" by adjectives *left* and *right* used in nominal phrases. Whereas in the case of NP's containing adjectives such as *wide*, *tall* and *short* the object "spoken about" is always the object denoted by the noun these adjectives modify, in NP's containing adjectives *left* and *right* grammatical surface structure reference does not always parallel semantic reference. Lexical items *wide*, *tall*, *short* in NP's *a wide bed*, *a tall boy*, *a short dress* presuppose some definite horizontal and vertical dimensions of the objects referred to by the nouns they describe, i.e., the bed, the boy, and the dress respectively. In NP's containing orientative *left* and *right* adjectives horizontal and vertical dimensions are presupposed for ob-

jects different from those denoted by the head nouns of these NP's. Examples 11-13 require a consideration of horizontal and vertical orientations of the car, the sofa, and the human face, not the wheel, the arm or the eye, cf.:

11. The front *left wheel* of my car needs checking.
12. You will find the money in *the left drawer* of his desk.
13. The man you have drawn has two *left eyes*.

In example 11 a specification of horizontal and vertical dimensions of a wheel, which is the object denoted by the head noun, is not possible at all for we do not speak of definitely fixed front and back or top and bottom parts of a wheel, even when it is in motion. In NP's of examples 12 and 13 it is possible to talk about recognized basic front/back and up/down orientations of a drawer or an eye but this information is not relevant for the interpretation of these NP's. A specification of vertical and horizontal dimensions of a drawer or an eye does not provide sufficient information for a description of these objects as *the left drawer* and *the left eye*. In the interpretation of examples 11-13 it is necessary to consider horizontal and vertical orientations of the objects spatially related to the objects denoted by the head nouns of these NP's, i.e., the objects denoted by the nouns in the following (11, 12) or possible (13) of-NP's. The relation between the two objects is such that the objects to which dimensional presuppositions of the lexical items *left* and *right* apply, contain, i.e., have as their proper parts, the objects denoted by the head nouns of NP's in question, i.e., a left wheel is an inalienable part of a car, a left drawer is an inalienable part of a desk, and a left eye has to be considered as a part of a human face.

It is relatively easy to interpret relevant dimensions of objects such as cars or desks since both English and Polish have set expressions to denote front and back parts of objects of everyday use such as vehicles and pieces of furniture, cf.:

14. Notice the $\left. \begin{array}{l} \text{back} \\ \text{front} \end{array} \right\}$ of his car.
— Zwróć uwagę na $\left. \begin{array}{l} \text{tył} \\ \text{przód} \end{array} \right\}$ jego samochodu.
15. He painted the $\left. \begin{array}{l} \text{front} \\ \text{back} \end{array} \right\}$ of his desk green.
— Zamalował $\left. \begin{array}{l} \text{tył} \\ \text{przód} \end{array} \right\}$ biurka na zielono.

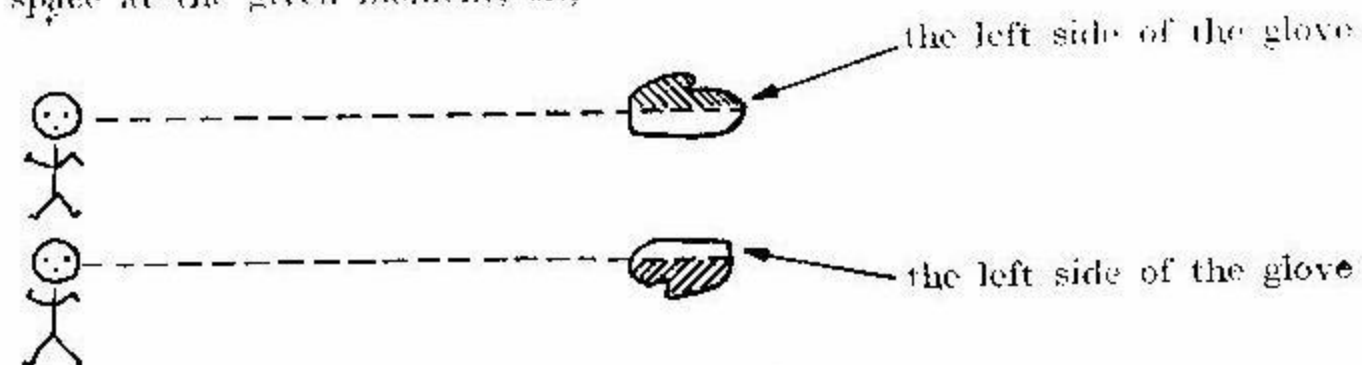
Objects in motion can be thought of in terms of fixed back-to-front orientations, their front being understood as the part which arrives earlier at any point along its path, and consequently, the left-to-right orientation of these objects can also be determined. Although we do not speak of fronts

and backs of such moving objects as e.g. a river, NP *the left/right bank of a river* — *prawy/lewy brzeg rzeki* will be given a unanimous interpretation since the direction in which the river is moving defines its back-to-front dimensions⁵.

Cars, desks and rivers are perceived in terms of their own, conventionally fixed left-to-right orientations but for objects such as streets, rooms, boxes (or virtually all single objects perceived by human beings) various left-to-right orientations are possible and the specification of left and right sides of these objects depends solely on the location of a human being watching them at the time of the speech act. For an interpretation of NP's such as *the left side of the street*, *the left wall of the room* or *the left page of the book* the presence of a human observer must be presupposed and it has to be assumed that the main horizontal and vertical dimensions of objects such as street, rooms and books are extensions of the up/down, front/back and left/right axes of the human observer. These orientations are fixed for the human beings and the objects which do not have basic orientations of their own acquire the orientations of the person watching them⁶. The left side of a street is in

⁵ In the case of objects which move forward performing circular movements at the same time, presupposing front/back orientations does not seem necessary since, by some sort of convention, the movement forward performed widdershins is called *the left-hand movement* (*ruch w lewo, niezgodny z ruchem wskazówek zegara* and the movement deasil is described as *the right-hand movement*) *ruch w prawo, zgodny z ruchem wskazówek zegara*). Cf. such NP's as *the left-hand thread screw* — *lewoskrętna śruba, korkociąg*, and *the right-hand thread screw* — *prawoskrętna śruba, korkociąg*.

⁶ It may be hypothesized that all objects which do not have front/back and up/down orientations of their own, or do not possess a plane of symmetry in their structure, acquire the axis of symmetry of the human viewer watching them at a given moment, and with respect to his axis of symmetry as their plane of reference they or their parts become *left* or *right* oriented; whatever falls to the left side in the range of the observer's vision at the given moment will be defined as *left*, and whatever falls to its right, as *right*. Any object which happens to be divided by the straight line which is an extension of the axis of symmetry in our range of perception can be described as having *left* and *right* sides but it should be remembered that these are not the *left/right* sides of this object in itself but what is by convention called *the left/right sides* of the object as perceived by the human observer. Objects denoted by specifying *left/right* adjectives do not have a plane of symmetry of their own and are not usually described as having *left* or *right* sides but one can use an NP such as e.g. *the left side of this glove* which will have to be interpreted with respect to the human observer whose axis of the range of his vision cuts across the glove providing the plane of symmetry with respect to which various parts of the glove can be called *right* or *left* depending on the position of the glove in space at the given moment, cf.,



fact the left side of the speaker standing in this street (and/or watching it), the left wall of the room is to the left of a man standing in this room, the left page of a book is invariably to the left of the human reader, even the lefthand traffic is defined with respect to the left side of a human being moving forward.

One might want to associate these remarks with an interesting linguistic fact observed in Old Polish, which had nominal derivatives from adjectives *left* and *right*. These abstract nouns, *lewica* and *prawica*, which denoted left and right sides/hands of a given object, always occurred with [+human] modifiers, cf.:

16. prawa strona/ręka ojca = *prawica ojca*
 (as in "siedzi po prawicy ojca")?
 (the right side/hand of the father)
17. prawa strona kościoła ≠ **prawica kościoła*
 (the right side of a church)

Polish abstract nouns derived from adjectives *left* and *right* cannot be paraphrased as Adj-N phrases in the way abstract nouns derived from other spatial adjectives can. Examples in 18 provide supporting evidence for my contention that *left* and *right* require separate treatment in the class of spatial adjectives, cf.:

18. a) *lewica ojca* — **lewy ojciec*
 the left side of the father — * the left father
- b) *szerokość rzeki* — *szeroka rzeka*
 the width of the river — the wide river

Another problem connected with an interpretation of NP's containing *left* and *right* adjectives is reflected in examples of 19:

19. a) the left side of a picture — *lewa strona obrazka*
 the left drawer of a desk — *lewa szuflada biurka*
- b) the left arm of the {*armchair*} — *lewa poręcz* {*kanapki*}
 {*sofa* } {*fotela* }
 the left wall of the room — *lewa ściana pokoju*

To understand these NP's a reference to the human being has to be made since the objects denoted by the head nouns of these NP's are all left-oriented with respect to the human being who either always uses them in a conventional way or is looking at them at the moment, but whereas in examples b) the human being, as the ultimate plane of reference, is thought of as po-

⁷ It should be remembered that *prawica* and *lewica* are anachronistic in Modern Polish — they are used only in literary texts for special stylistic effects.

sitioned within the object referred to by the nouns in the *of*-phrases, in examples a) he is presupposed to assume the position outside the object. The fact that an object with a plane of symmetry and sides can be viewed from the outside or the inside influences the interpretation of the NP's denoting oriented parts of this object. Fillmore (1971) points out these interesting facts about the "inner" and "outer" orientation of the objects referred to by the adjectives *left* and *right* but he refuses to include this information into the lexicon as presuppositional facts about these adjectives. His suggestion is to leave this observation for encyclopedias and not include it in the dictionaries.

It seems impossible to specify the presuppositional component of *left* and *right* in an adequate way so as to account for all the facts discussed above and therefore Fillmore's (1971) proposal is not fully satisfactory.

Whereas the meaning of NP's containing specifying *left* and *right* adjectives can always be determined since the objects denoted by the head nouns of these NP's possess in their structure an inherent irregularity which makes it possible to define them as either *left* or *right* (which is following from an arbitrary decision of human beings who deal with these objects in some conventional way and describe them by applying the terms analogous to those used in denoting inalienable left and right oriented parts of their body), to interpret the meaning of NP's containing *left/right* adjectives recourse to context which provides a plane of reference is indispensable. In some cases the plane of reference is provided by the immediate context of the sentence if the referents of the relevant nouns or pronouns can be clearly determined, e.g.:

20. Mary found the money in the left pocket of *John's* coat.
 Marysia znalazła pieniądze w lewej kieszeni płaszcza *Jana*.
21. Where is *my* left sock?
 Gdzie jest *moja* lewa skarpetka?

In many cases, however, the referents of NP's containing orientative *left/right* adjectives cannot be determined without the knowledge of the speaker's location and his orientation towards the object denoted by the modified noun at the time when the speech act is performed. The location and orientation in space of the participants in the conversation is absolutely essential to an understanding of examples 22 and 23, cf.:

22. Hang this picture on the *left* wall.
 Powieś ten obraz na *lewej* ścianie.
23. Will she put the vase on the *left* side of the table?
 Czy ona postawi ten wazon po *lewej* stronie stołu?

The use of *left* in 22 and 23 is a perfect example of what Fillmore (1973:1)

calls "deictic function of linguistic material" since the adjective here relates the object to the observer's point of view assuming his conception of space. In a series of recent lectures on "Place, space and time" Fillmore (1973) discusses various ways in which natural languages reflect what is called "deictic anchorage of sentences", i.e., "an understanding of the roles sentences can serve in social situations occurring in space and time" (1973a:1). He believes that "principles of linguistic description should be geared in some way to deictically anchored sentences" (Fillmore 1973:16) and that this programme can be realized in the generative semantics framework.

Since a linguistic theory accounting for deictic conceptions of place, time and space of the speech act has not been formulated yet, the problem of the deictic function of orientative *left/right* adjectives seems to belong to the province of semantic pragmatics, which concerns itself with "the study of linguistic acts and contexts in which they are performed" (the definition given by Stalnaker 1972:380). Orientative adjectives *left* and *right* in relevant NP's like those in 22 and 23 should be included in the class of recognized indexical expressions, such as personal pronouns *I* and *you*, tenses, etc., as their reference and, consequently, the reference of NP's in which they occur, cannot be determined without the knowledge of the context of use⁸. Indexical expressions are typical instances of problems which should be solved in semantic pragmatics. In a paper presented at the 1973 Texas Conference on Presupposition Stalnaker argued for a separation of semantic and pragmatic presupposition. It is his contention that certain types of presupposition should be ascribed to people, not sentences, and that these pragmatic presuppositions make it impossible to dispense with presuppositional component in the lexicon. In view of the difficulties connected with the specification of the presuppositional component for *left* and *right* as lexical entries, it seems reasonable for an economical account of NP's containing adjectives *left* and *right* to repeat after Stalnaker (1973:13) that since these NP's are used in a conversation they "make sense only as a sequence of rational actions on the assumption that the speaker and the hearer share certain presuppositions". These presuppositions are not properties of the adjectives in NP's considered, but "the properties of conversations in which these expressions are used. They are different in different contexts of conversation and are determined by general conversational rules". This solution may not be absolutely satisfactory but at the present stage of development of pragmatics has to be accepted.

A summary of the main points I have been trying to make about the semantics of adjectives *left* and *right* is in order. I have claimed that there are

⁸ The term "indexical expression" is ascribed to Bar-Hillel. Other philosophers, when referring to indexicals use various terms, e.g. Russell calls them "egocentric particulars", Reichenbach — "token-reflexive expressions", Goodman — "indication words". For a discussion see Montague, R. (1972).

two kinds of spatial *left/right* adjectives: a) specifying adjectives which modify nouns denoting objects of irregular shape with no plane of symmetry of their own, and b) orientative adjectives which modify nouns denoting objects regular in shape with a plane of symmetry of their own. The function of specifying *left/right* adjectives is to denote the inherent property of being left or right of the objects denoted by the nouns they modify, whereas orientative *left/right* adjectives are used to orient the objects denoted by their head nouns in space, with respect to the planes of symmetry of other, bigger objects which "contain", i.e., have as their proper parts, the objects in question or/and the human beings viewing the objects in question from the outside or the inside of the "containing" objects. I have observed that NP's containing *left/right* adjectives of the specifying type do not have to presuppose the existence of other related objects in space, whereas for an interpretation of NP's containing orientative *left/right* adjectives such a presupposition is a condition sine qua non. These facts about adjectives *left* and *right* are reflected in the linguistic behaviour of NP's in which they occur. In NP's with the specifying adjectives, head nouns are not further modified by other nominal structures whereas in NP's with orientative *left/right* adjectives additional modification (often by means of an *of*-phrase in English and a noun in the Genitive in Polish) is necessary, except in some frequently used expressions which can delete the *of*-phrase structure of modification but the presence of the referent of the deleted noun has to be presupposed, e.g. *the left eye = the left eye of/in a face*.

The distinction between the two types of *left/right* adjectives is important for Fillmore's (1971) proposal to handle semantic implications of *left* and *right* in the presuppositional component of the lexical entries for these adjectives, because it allows us to limit to the orientative type the class of *left/right* adjectives which require lexical presupposition. I have further observed that in many cases orientative *left* and *right* become indexical expressions and that problems connected with their interpretation are subject proper of semantic pragmatics. I have suggested that they would be best treated in terms of pragmatic presupposition which, according to a recent proposal by Stalnaker (1973), substitutes lexical presupposition, and that all presuppositions involved in the use of adjectives *left* and *right* should be viewed as the property of a conversation carried out according to the natural rules of conversation (as specified by Grice 1968).

In a contrastive discussion of the semantic problems involved in the use of *left* and *right* the question of the universality of the notions expressed by these two adjectives should be considered with respect to spatial as well as figurative meanings of *left* and *right* in English and in Polish.

Bierwisch (1967), following the line of thought on semantics proposed by Katz and Postal, (1964), assumes the existence of a universal set of sem-

antic primes from which inventories of primitive semantic elements are to be selected. As to the question of whether these primitive elements should be ascribed to people or to the surrounding objects, he adopts the point of view characteristic of the philosophical school of conceptualism, cf.:

"There are good reasons to believe that semantic markers in an adequate description of a natural language do not represent properties of the surrounding world in the broadest sense, but rather certain deep seated, innate properties of the human organism and the perceptual apparatus, properties which determine the way in which the universe is conceived, adapted, and worked on" (Bierwisch 1967: 3).

Later in his paper, however, he describes the universality of semantic markers as "not a theoretical accident but a constitutive fact of human speech, of the capacity that de Saussure called *langue*" (Bierwisch 1967:4). This view enables him to discuss certain relations between objects and the human beings that deal with these objects in terms of semantic properties of words. He believes that the relation of language and thought, i.e., "the necessary set of semantic primes and its interpretation from our point of view" "is not a matter of a priori speculation but... may be approached only by tentative analysis of different languages" (Bierwisch 1967: 35). Bierwisch suggests the following "heuristic principle" for carrying out semantic analyses of expressions of language:

"A semantic analysis of a lexical item is finished only if it leads to a combination of basic elements that are true candidates for the universal set of semantic markers, i.e., that may be interpreted in terms of basic dimensions of the human apperceptive apparatus" (Bierwisch 1967:37).

The semantic analysis of the adjectives *left* and *right* attempted in this paper on the material from English and Polish may be taken to suggest that the notion of left-right orientation is universal and thus should find some reflection in all languages. In Polish and English it happens to be rendered by means of adjectives (*left/right* in English and *lewy/prawy* in Polish) which may be explained as a consequence of common membership of these two languages in the Indo-European family, and when viewed from a wider perspective, a reflection of the similarity of cultures these two languages represent.

Fillmore believes in the universality of certain notions of spatial orientation. In his lecture on "Space" he explains this universal fact which finds reflection in "all the well known languages on this earth" as a consequence of the definite biological structure of human beings who "all have semi-circular canals in their inner ears and therefore perceive this world in terms of the vertical up/down orientation determined by the direction of the gravitational forces,⁹ and two horizontal axes: front/back and left/right, the former determined by the location of the organs of perception in animals and the direction of movement for all other objects in motion, and the latter, left/right orientation, being fixed for all human beings, and then, by analogy, applied to other

sorts of objects which have the requisite up/down and front/back orientations" (Fillmore 1973a: 6). This last explanation is convincing to the extent that the objects considered can move and/or see and we can speak of their left and right sides but it does not account for such linguistic facts discussed in the first part of this paper as *the left/right wall of a room* or *the left/right side of a street*, for an interpretation of which the knowledge of the orientation of the speaker and viewer at the time of the speech act is indispensable, nor does it explain why asymmetrical enantiomorphic objects such as left and right gloves are also described by means of *left* and *right* though they do not have "the requisite up/down and front /back orientations".

Asymmetrical structure of the human body with the heart located in one of its two otherwise practically symmetrical parts allowed human beings to define the heart-containing part of the body arbitrarily as *left* and thus, "fix" (to use Fillmore's (1973:6) term) the left/right orientation for the humans on the basis of the anomaly in the structure of their organisms. It should be kept in mind, however, that this asymmetry is neither visible nor obvious and therefore, perhaps, the concepts of *left* and *right* are learned only by demonstration and practice. It can be commonly observed that little children do not know which is their left hand and which is the right one until they have come to associate the term *right hand* with the actions they are trained to perform with this hand. The contexts in which a child learns the meaning of the adjectives *left* and *right* are most frequently provided by such familiar childhood imperatives as: *Jedz prawą rączką* (Eat with your right hand), *Przeżegnaj się prawą rączką* (Make the sign of cross with the right hand), *Nie pisz lewą rączką* (Don't write with your left hand), etc. Fillmore (1973a: 6) notices that there are people who never succeed in learning the distinction between the notions of *left* and *right*.

In view of these observations the question of why the speakers of various languages use the spatial terms *left* and *right* in the same way is extremely puzzling. The fact that, to my knowledge, there is not a single example of *left-Noun* in English that would correspond to *prawy-Noun* in Polish may be explained by the similarity of the two cultures represented by two languages of the same family, but why should this correspondence be observed in totally unrelated languages, even when figurative meanings of these adjectives are considered? In a paper at the seventh meeting of the Chicago Linguistic Society in 1971, M. Durbin quoted an interesting fact that the meanings of the English adjective *right*: a) *right* as in *the right hand*, and b) *right* as *correct* correspond to and are also semantically related in a genetically unrelated language, Yucatec Maya, where the word *no'oh-right* has the two meanings: a) as in *the right hand* and b) *correct* (Durbin 1971: 351)⁹.

⁹ In mathematics one of the unsolved problems of communication known as the "Ozm's problem" consists in the impossibility of giving a strictly unanimous definition

Defining the terms *left* and *right* not all languages rely on the anomaly in the structure of the human bodies. Fillmore (1973:6) quotes a Chinese dictionary definition of *left* and *right*, where *left* is defined simply as the opposite of *right*, and *right* as the opposite of *left*. Polish dictionaries, but not the English ones, introduce *left* as the basic concept in the *left-right* pair, *right* being defined as the opposite of *left*. In physics and biology *left* also seems to be the basic orientation. In physics, the structure of a magnetic field is a typical instance of asymmetry since a compass needle when put under a conductor with a flowing stream of electric current will always move to the left in the direction of the North Pole, and not once to the left, once to the right as might have been expected; this physical law is known as the principle of the left hand (cf. also the principle of the left-hand thread screw). In biology, the particles of all proteins have been described as asymmetrical and left-oriented since they contain only the left form of various compounds of carbon¹⁰.

In a paper "On the semantic structure of English adjectives" Givon (1970:817) provides linguistic evidence to the effect that "two members of an adjective pair share a basic quality, though they are somehow differently oriented with respect to that shared quality". He considers pairs of adjectives of measure such as *big-small*, *short-long*, etc. and observes that one member of the pair "seems to always function as the UNMARKED of generic cover-term for the common quality involved in both members" (1970:817). His evidence is partially taken from Vendler (1968), who observed that questions like: *How big is it?* may be answered by *It's very big* or *It's very small*, while questions like *How small is it?* may only be answered by *It's very small*, never by **It's very big*. Givon claims that members of all adjective pairs are NEGATIVELY RELATED and proposes a negative pairing test to show it. Adjectives *left* and *right* do constitute an obvious pair but the specification of the quality they are supposed to share, according to Givon, is a very difficult task since in their orientative meaning, they do not indicate a quality of the objects referred to as *left* or *right*. There are no abstract terms in English to define "leftness" or "rightness" of an object¹¹.

of *left* and *right*. The problem was clearly formulated in 1961 (though it was earlier pointed out by Kant) when the Danish mathematician Hans Freudenthal attempted to construct a logical language "Lincos" (in the work called *Design of a language for cosmic intercourse*) which would be a system of communication with intelligent beings from outside our galaxy. He found it absolutely impossible to communicate the notion of *left* and *right* to the beings who are not constructed like the humans. The discussion of the problem and its consequences is given in Gardner, M (1969: chs. 18, 25).

¹⁰ For more examples of asymmetry and enantiomorphism in nature see Gardner (1969:chs. 6-16).

¹¹ It should be mentioned here that *A new English dictionary on historical prin-*

Still, Givon's (1970) negative pairing test applied to the *left/right* pair suggests that these two adjectives are negatively related, although in their primary, spatial sense no overt negative marker is present in either member of the pair, i.e., to describe orientation in space English and Polish do not employ adjectives such as **unleft*, **unright*, **nielewy*, **nieprawy*, cf.:

24. a) John has only his *right* shoe and Mary does not have her

**right* either

left

right

**left*

b) Jan ma tylko prawy buta i Maria nie ma lewego buta.

**prawego*

lewy

prawego

**lewego*

The question of which of the two members of the pair is the one incorporating the negative marker seems impossible to be solved on purely syntactic grounds. In the pair *long-short* we may speak of the *length* of objects rather than their *shortness*, cf. *What's the length of the table?*, not **What's the shortness of the table?*, also *The pencil is 5 centimeters long*, not **The pencil is 5 centimeters short* (when the length of the pencil in its positive sense is meant), and these facts make it possible to define *short* as the negatively marked, non-generic member of the pair, whereas a similar test is not possible in the case of the spatial *left-right* pair of adjectives.

Docent Pisarkowa has pointed out to me that in Polish in the opposition *left/right=lewy/prawy*, *left=lewy* is clearly the negatively marked member since it denotes the back or wrong side when the two adjectives are used in reference to the sides of material, while *right=prawy* remains neutral denoting the neutral side, the one naturally turned towards the viewer. In Polish there are two expressions to describe the action of inverting or remaking a garment so that the inner (*lewy*) surface becomes the outer (*prawy*) surface: the infinitive *przenicować* (turn) and the more colloquial phrase: *prze-wrócić na lewą stronę* (turn to the left side), cf.:

25. a) Znowu włożyłeś podkoszulek na lewą stronę

**prawą*

b) You've put your vest on *inside out* again.

**inside in*

principles (Bradley 1903) lists the abstract noun *leftness* defining it as "the condition of being on the left". The word was used by W. James in 1887:

"Rightness and leftness, upness and downness, are again pure sensations differing specifically from each other"

The words are not given in dictionaries of current English.

The expression *włożyć/przewrócić co na prawą stronę* (turn something to the right side, put it on inside in) is possible but the implication *turn it BACK to the right side, put it on the right way again* is always present in sentences containing the phrase. In neutral, unemphatic situations the VP *włożyć co na prawą stronę* is not used since the phrase *włożyć coś na siebie* (to put something on) really implies *to put something on the right way*, i.e., *inside in* (na prawą stronę) when the expression is used in reference to human garments¹².

Another linguistic and statistical argument for the markedness of *left* in opposition to the neutral status of *right* can be furnished when the occurrence of the terms used in reference to unequal skill with human beings use their hands is compared. Most people are more skillful and manipulative with their right hands¹³, and those who prefer to use their left hands "stick out" in the society as "different, unnatural" (rightly or wrongly but such is still the popular opinion). Although two terms: *right-handed/praworeczny* and *left-handed/leworeczny* exist in English and in Polish, the latter is the marked one and naturally, has a much higher frequency of occurrence. This fact is certainly true about Polish, which according to Sławski (1971: 190, 191), has at least six expressions to denote left-handed people: *leworeczny*, *mańkut*, *leworeki* (rare), *lewy* (dialectal), *lewak* and *lewic* (in the Kaszuby dialect), and only two used in reference to the right-handed people: *praworeczny* and *praworeki* (obsolete), both occurring very seldom.

Historically, English *left* derives from Middle English *left*, *lift*, *luft* with the original meaning of *weak*, *infirm*, *worthless* (Skeat 1901, Bradley 1903), later used to denote "the weaker hand and the left side", cf. ME *Lufthand*, *luft side*, *lift half*, *lifte schulder* (Bradley 1901). In Old English *left* was rare, the usual word being *winstre*, but corresponding terms such as OE *lēf* — *infirm*, *diseased*, and *gelēfed* — *weak*, *old* were used. In Anglo-Saxon *lyft-ald* denoted palsy. According to Webster, Walde connects OE *lēf* distantly with Latin *lētum* — death, and Greek *loimós* — pestilence, *līmos* — hunger, and Lithuanian *lesās* — thin. Bradley (1903) lists as corresponding terms *lēfung* — paralysis in OE and *gelēbōd* — lamed in OS, but to him their etymological connections with *left* are doubtful.

Polish *lewy* has never been used as a synonym of weak. According to Sławski

(1971), *lewy*, noted in Polish in the fourteenth century, was first used as the Genitive of the nominal declension, and sometimes as the Locative, cf. *z lewa*, *na lewie* (on the left side). It was frequent in its figurative meanings of *illegal* and *wrong* (in Grzegorz from Żarnowiec, the sixteenth century, and in Pasek, the seventeenth century), also in reference to the back side of material. Today it is a synonym of *progressive*, *radical*, *revolutionary*. The word is present in all Slavic languages with the same meanings of *sinister*, *radical*, *not principal* (about the sides of material). It comes from Old Slavonic **lěvъ* — *sinister*, used figuratively in the negative meaning of *unjust*, *false*, *bad*, *not straight*. The IE form of the word is **laiyo* which probably meant *curved*, *not straight*. The root is found in some Lithuanian dialects as in *iš-laivóti* — to curve, to make turns, to swerve.

An interesting change of meanings can be observed when the original and the modern senses of *left* are compared in the two languages. In English, the original sense of *left* as *weak*, has completely disappeared and the later, directional sense has assumed its place. In Polish, the old figurative meaning of *lewy* as *bad and false* is becoming more and more popular in colloquial speech and slang.

The primary meaning of *right* (Anglo-Saxon *riht*, *ryht*, ME *riht*, Old High German *reht*) was *straight*, *erect*, *right*, cognate with Latin *rectus* and Greek *orektos*. In Modern English this meaning is obsolete, except in such frozen expressions as: *right line*, *right sailing*, *right angle*. According to Brückner (1970), Polish *prawy* comes from Old Church Slavonic with the primary meaning of *real*, *true*, *just*, *right*, cf., e.g., *z prawego łoża*, *prawy młodzieniec*, *prawy sędzia*, *prawica* (a virgin). The word is related to *prawda* (truth), *prawo* (law), *prawić* (to judge, to speak in an authoritative manner), obsolete *prawota* (justice). *Prawy* as the opposite of *lewy* came into use as a substitute form for an earlier word *dešin*, cognate with Lithuanian *deszinas*, Latin *dexter* and Greek *deksios* (cf. English *dextral*).

An examination of figurative meanings of *left* and *right* and the use of these two adjectives in idiomatic expressions in English and Polish reveal many interesting facts about the psychological attitude towards these two notions of the speakers of the two languages. In both English and Polish, when adjectives *left* and *right* become evaluative in their meanings *left* and *lewy* tend to denote negative qualities whereas *right* and *prawy* acquire clearly positive status. This parallelism can be observed when expressions connected withmorganatic marriage are compared in the two languages. *Left* and *left-hand* are pejorative epithets in English phrases *to marry with the left hand*, *a daughter by the left hand* and correspondingly in Polish, where *lewy* is a synonym of *illegitimate*, cf. *ożenić się na lewą rękę*, *ślub z lewej ręki* (Doroszewski 1962), *dziecko z ewej ręki/strony* (Karłowicz, Kryński, Niedźwiedzki 1900), all three obsolete in Modern Polish. Out of some modern uses negative *left* in the following idioms

¹² Fillmore (1971) observes that adjectives *left* and *right* are present in the surface structure only when there is a need to stress them (which seems to me to imply that they are not what Baker (1973:21), calls "epithetical adjectives" such as e.g.

"a racially superior Arian". His example is:

(51) She slapped me with her left hand

where the verb *slap* normally has *hand* as an incorporated instrumental, unnecessary in the surface structure. In this example the instrumental *hand* is present only because it needs to be modified by *left* (Fillmore 1971: 380-381).

¹³ For statistics and current explanations why this is so see Gardner (1969: 104-114).

can be quoted: *kupić/nabyć co z lewej ręki* (to buy something with the left hand, i.e., purchase from an illegal source), *wstać lewą nogą* (to get up with the left leg; an expression used as an explanation of somebody's low spirits or bad luck on a given day) (Skorupka et al. 1968). *Lewy* is often used as a synonym of *false* or *forged* in such NP's as: *lewy paszport, papiery, dokumenty, świadek* (left passport, papers, documents, witness), *lewe dochody* (unlawful income). In colloquial and slangy speech it means *no good, unattractive, uninteresting*, as in *lewy facet, film, babka, książka* (the left guy, film, chick, book). Expressions like the one in *Jan ma dwie lewe ręce* (John has two left hands) are used to stress subject's clumsiness. In English, *a left-handed compliment* is a compliment of doubtful sincerity, obsolete proverbial expressions like *to see with the left eye, to work with the left hand* imply inefficiency in performance, *to go over the left shoulder* meant *to be squandered* (Bradley 1903). *Left-hand(ed)* may occasionally mean *fictitious, ill-omened*. *Right* and *prawy* are positively marked in expressions such as: *John is my right hand on the farm* — *Jan to moja prawa ręka w gospodarstwie* in English and in Polish, also in the English: *This served him right*. *Right* is a synonym of such positive epithets as: *correct* and *just*, cf. *the right answer, the right man for the job, the right hand man* — as chief, indispensable assistant; in Polish *prawy* often denotes positive qualities of somebody's character and behaviour, thus being a synonym of *virtuous, noble, righteous, upright*, cf. *prawy człowiek* (a noble man), *iść prawą drogą* — *to keep in the right path*. There is another meaning of Polish *prawy* which corresponds to English *rightful, lawful*, cf., e.g., *prawy właściciel* — *the right owner, sąd prawy, prawe ustawy* (legal court, lawful bills).

In politics the adjectives *left* and *right* are used in both languages to denote the radical and the conservative political groups, respectively. In English the terms connected with political *left* are: *leftism* (n) — political views of the left, the *Left* (n) — the Left (Wing) of a party, *leftist* — a politician of the left, *left-winger* — a politician of extreme left; those connected with the traditional *right* are: *the Right (Wing), rightist* (n), — a member of the right wing, and *rightist* (adj) — of the right, as in *rightist sympathizers*. All these terms are stylistically neutral, whereas in Polish, some of the 'political' *left* and *right* expressions are stylistically marked, cf. *lewica* (leftism), *lewicowiec* (a leftist) are neutral but *lewak* (a person advocating the views of extreme left and demanding that they be realized independently of social and human considerations) is a pejorative expression, marked negatively along with its corresponding terms *lewactwo* (n) and *lewacki* (adj) (Skorupka et al. 1968). There is no corresponding positive term to denote the views of extreme right. The existing terms: *prawica* (the Right Wing), *prawicowiec* (the rightist), and *prawicowy* (rightist as an adjective) as in: *prawicowy dziennik, prawicowe poglądy* (the rightist journal, the rightist views), are considered neutral.

In the vocabulary of some sports and in the road traffic regulations *left* and *right* are unmarked in both languages, e.g., in boxing, a blow delivered with the right hand is called *the right hand* in English, and in Polish its technical name is modified by *prawy*, as in *prawy sierpowy*; in American baseball the left-hand part of the outfield, as viewed from the home plate, is called *the left field* and the players to the left and right of the catcher's area are referred to as *left* and *right fielder*, respectively. Polish terms used when talking about football are: *lewy/prawy obrońca, lewa/prawa obrona* and the adjectives *lewy/prawy* refer to the names and positions of players viewed from the position of the goalkeeper of their team.

In the vocabulary of traffic regulations expressions for *left and right hand traffic* (*ruch lewo i prawostronny*) exist in both languages, but there are grammatical differences in the use of terms referring to particular road signs, e.g. the sign *turn left/right* is an imperative S in English though in colloquial speech *to take a left/right turn* is used, whereas in Polish the direction to the left/right is always expressed adverbially, cf. *zakręt w lewo/prawo, skrócić/zakręcić w lewo/prawo*¹⁴. Neither *left* nor *right* are stylistically marked in the vocabulary of road traffic.

Bierwisch (1967) suggests that the minimum number of meanings of a given adjective is determined by the number of its possible antonyms, cf. the results of this test when applied to prenominal *left* and *right* in English and in Polish:

English	Polish
<i>right</i> — <i>left</i> (hand, blow)	<i>prawy</i> — <i>lewy</i> (but, strona materiału),
— <i>wrong</i> (side of material, answer)	— <i>nieprawy</i> (charakter, łoże)
	<i>lewy</i> — <i>prawy</i> (ucho, wycieraczka)
<i>left</i> — <i>right</i> (lung, pocket)	— <i>prawdziwy</i> (paszport, dowód)
	— <i>?nielewy</i> (as in: "Potrzeba byś chciał nielewym sercem i okiem czytać pisma święte" — Kryński et al. 1900)

The test shows that in Modern English *right* has two true meanings: a) the opposite of *left*, b) correct; in Polish *prawy* has two meanings too: a) the opposite of *lewy* and b) legitimate, righteous; *left* has only one meaning: the opposite of *right*, but *lewy* has three meanings: a) the opposite of *right*, b) not true, false, c) no good unwilling (obsolete). These are not all the meanings of the adjectives in question for there are meanings of *left* and *right* in both languages which cannot be described in terms of antonyms, e.g. *lewy film* but not

¹⁴ Doroszewski (1962) has a nominal compound entry for *a left turn* in Polish as *lewoskręt* (he quotes a newspaper line from 1955 when the word was used). I have never heard the word *lewoskręt* used and I feel doubtful about its position in the lexicon of Modern Polish.

**prawy/nielewy film* in Polish and *right angle* but not **wrong left angle*. The results of this test, however, are interesting from the contrastive analysis point of view. They suggest that Polish and English may be very different in the use of word negation. It seems that English does not form adjectival antonyms by means of negative prefixes as often as Polish which can be seen on the example of *left/right* pair and their antonyms¹⁵. They also show that there is no one-to-one lexical equivalence between the two languages in the use of *right/left* pair in its various meanings in reference to particular nouns, e.g. Polish *lewy* in *lewa strona materiału* (left side of material) corresponds to English *wrong*, not *left*.

Another interesting surface structure difference involving prenominal order of adjectives *left* and *right* in multiadjectival nominal phrases can be observed in the following examples:

English		Polish
$\left. \begin{array}{l} \text{upper} \\ \text{lower} \end{array} \right\} \left. \begin{array}{l} \text{left} \\ \text{right} \end{array} \right\}$ corner		* $\left. \begin{array}{l} \text{górnny} \\ \text{dolny} \end{array} \right\} \left. \begin{array}{l} \text{lewy} \\ \text{prawy} \end{array} \right\}$ róg
* $\left. \begin{array}{l} \text{left} \\ \text{right} \end{array} \right\} \left. \begin{array}{l} \text{upper} \\ \text{lower} \end{array} \right\}$ corner		$\left. \begin{array}{l} \text{lewy} \\ \text{prawy} \end{array} \right\} \left. \begin{array}{l} \text{górnny} \\ \text{dolny} \end{array} \right\}$ róg

It does not seem convincing that the difference in the order of prenominal *left/right* and *upper/lower* adjectives in Polish and English shows anything about the meaning of these adjectives and I do not believe that it might suggest a difference in the perception of the left/right and up/down orientations by the members of the two cultures represented by these two languages. The matter is purely syntactic and seems to follow from different surface structure constraints on the order of prenominal elements in Polish and English. In teaching the prenominal order of adjectives in English to the Polish students this pair of examples has to be pointed out as a possible source of errors due to native language interference.

¹⁵ Rich evidence to this effect is furnished by compound adjectives containing *lewy* and *prawy* as their first elements, cf.:

<i>prawy</i> — <i>lewy</i>	<i>prawy</i> — <i>nieprawy</i>
— * <i>nieprawy</i>	— * <i>lewy</i>
prawobrzeżny/lewo-brzeżny dopływ	prawomocny/nieprawomocny wyrok
praworęczny/leworęczny człowiek	prawomyślny/nieprawomyślny obywatel
prawoskrętny/lewoskrętny korkociąg	praworzędny/niepraworzędny naród
prawostronny/lewostronny ruch	prawowierny/nieprawowierny katolik
	prawowity/nieprawowity król

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