

ENGLISH AND POLISH SINGULAR NOUNS AND ARTICLE USAGE IN ENGLISH ¹

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One of the most difficult problems of English grammar faced by both teachers and learners of English, is the use of the articles *the* and *a*. It is not the intention of this paper to present a complete contrastive analysis of English and Polish noun phrases and thereby provide a guide to the use of articles in English, but it is hoped that some of the fog covering the issue can be cleared and a better perspective taken on it. In particular, it is felt that the traditional notions of definiteness, genericness and specificity frequently used to describe the occurrence of English articles are inadequate because they ignore a more basic distinction between those situations where articles are used in general and where they are not and pay little attention to contextual and conventional determinants — not always the same for each language — which enable the interpretation of noun phrases in terms of these notions.

Because the most obvious distinction between English and Polish noun phrases is the fact that English is able to mark nouns which are uninflected for plural with the article *a*, while Polish has no equivalent overt marker for the semantic interpretations English associates with the presence or absence of this article, this paper will be primarily concerned with this distinction. Data from English and Polish shows that a general distinction between quantitative and non-quantitative interpretations of noun reference is relevant to both languages and that the use of articles in English is restricted to instances where quantitative presuppositions exist which involve reference to a single set or subset as a whole unit. The main concern of the paper is to point out various linguistic and non-linguistic factors involved in the choice of the use of the article *a* in English.

¹ This paper is a revision of one given at the 15th International Conference on Contrastive English-Polish Studies, May 10--13, 1978 at Tleń, Poland. I wish to express my gratitude to my many Polish informants, in particular to Dr. W. Furmańczyk and Dr. J. Wehna. Any shortcomings of the paper are my own.

The notion of "mass noun", whether with reference to English or Polish, is applied to nouns like *fowl*, *pollution*, *majoram*, *beton* "concrete", *mięso* "meat" and *chrzan* "horseradish", where reference to some generic object which is not normally segmented — often is treated as being incapable of segmentation — into individual subcomponents of the same generic type is involved. While the use of the word "mass" is questionable when objects of a more abstract nature are involved as referents - e.g. *pride*, *intelligence*, *acting*, *pomoc* "help", *wolność* "freedom", *sprawiedliwość* "justice", similar semantic and morphological conditioning occurs with these words as well: in most contexts both groups fail to form plurals or be subdivided.

- 1) *a fowl *fowls
 *an intelligence *intelligences
 *jedna krew "one blood" *krwi "bloods"
 *jedna wolność "one freedom" *wolności "freedoms"

Apart from these examples one finds a large number of words which readily appear as both mass and count nouns:

- 2a) Harry prefers to eat salmon.
 b) All salmon swim to their spawning grounds during the spring.
- 3a) Rainfall is crucial to the life of a forest.
 b) Constant rainfalls get Sandy down.
- 4a) Wódkę robi się zwykle z kartofli.
 vodka-acc. makes itself usually from potatoes.
 Vodka is usually made from potatoes.
 b) Trzy wódki dziennie to za mało dla lingwisty.
 three vodkas daily that as little for linguists.
 Three vodkas a day is too little for linguists.
- 5a) Jemy $\left\{ \begin{array}{l} \text{zupę} \\ \text{zupy} \end{array} \right\}$ przy każdym obiedzie.
 We eat $\left\{ \begin{array}{l} \text{(soup)} \\ \text{soups} \end{array} \right\}$ with every lunch.
 b) W sklepie są różne zupy.
 in store are various soups.
 In the store there are various soups.

In spite of the apparent unacceptability of the forms in (1), count forms for these words usually can be produced easily and regularly by native speakers and, with a bit of imagination, even a variety of contexts found where these forms will be logically acceptable but perhaps contrary to normal usage. There is no logical reason, for instance, why the principle which allows one to use *salmons* with the interpretation species of salmon should not be extend-

ed to allow *fowls* with a parallel interpretation. This indicates that restrictions on the use of these words are not due to general properties of the grammars of English and Polish — unless semantic classification and/or syntax is the determinant — as is the case in (6 and 7) — but rather to linguistic conventions applying to particular words.

- 6a) Bret rode (*a) shotgun on the Sacramento route.
 b) Mary likes (*a) variety in her life.
- 7a) Według informacji jaką otrzymałem od nauczyciela języka polskiego, Polska posiada silnie rozwinięty przemysł chemiczny.
 according-to information such-as I-received from teacher of-language Polish, Poland has strongly developing industry chemical
 According to information I obtained from my Polish teacher, Poland has a strongly developing chemical industry.
 b) Jeszcze jedna informacja o tym jest mi potrzebna.
 still one information about it is for-me needed
 I need still one more bit of information.

In the following we will present a general discussion, without detailed proofs, of the concept underlying the notions "mass" and "count" and define the various factors involved in the interpretation of nouns with respect to these notions.

For both English and Polish we will generalize conditioning factors on the use and the interpretation of singular nouns to two types: textual environment and convention. Each of these types should be considered as covering both linguistic and non-linguistic factors. Thus textual environment includes not only the syntax and semantics of a given sentence or text but also that kind of experience which enables us to infer that two different event-sites are involved in (8a), but not necessarily in (8b); and convention refers not only to language specific phenomena but to psychological and behavioral patterns that may be involved in the use and interpretation of words, sentences and texts in a given language. First we will be primarily interested in linguistic factors, but later the non-linguistic factors will be outlined and related to the linguistic ones.

- 8a) John broke his leg and went to the hospital.
 b) We went to the park and had something to eat.

CONTEXT: For the moment, consider (9 and 10), where Polish, in contrast to English, shows a great dependence on broad contextual reference in order to assign interpretations of reference to singular noun forms. In (9b) the word *obrona* "defense" has a general "mass" sense; in (9c) it

- 9a) Grażyna sformułowała trzy argumenty w obronie słusznej krytyki.

Grażyna formulated three arguments $\left\{ \begin{array}{l} \text{in defense} \\ \text{her defense} \end{array} \right\}$ of proper criticism.

b) Mamy trzy argumenty w obronie słusznej krytyki wysunięte przez Grażynę.

we-have three arguments in defense of-proper criticism proposed-acc. by Grażyna

We have three arguments proposed by Grażyna in defense of proper criticism.

c) Znalazłem tylko trzy argumenty popierające sformułowaną przez Grażynę obronę słusznej krytyki.

I-found only three arguments supporting formulated-acc. by Grażyna defense of-proper criticism

I found only three arguments supporting the defense of proper criticism formulated by Grażyna.

10a) Na obrazku widać kobietę przy montażu nowego samochodu, przeznaczonego do sprzedaży tylko w dwunastu sklepach.

in picture to-see woman-acc. at assembly of-new automobile, marked into sale only in twelve stores

In the picture one can see a woman assembling a new automobile, marked for sale in only twelve stores.

b) Na obrazku widać kobietę przy montażu nowego samochodu, przeznaczonego tylko dla Janka, który chce w nim startować w niedzielnym rajdzie.

in picture to-see woman-acc. at assembly of-new automobile, marked only for John, who wants in it to-start in Sunday-adj. race.

In the picture one can see a woman assembling a new automobile, being made only for John, who wants to begin Sunday's race in it.

c) Na obrazku widać kobietę przy montażu nowego samochodu, którego kupnem interesuje się tylko dwunastu osób.

in picture to-see woman-acc. at assembly of-new automobile, of-which purchase-instr. interests itself only of-twelve persons.

In the picture one can see a woman assembling a new automobile which only twelve people are interested in buying.

involves reference to a specific defense given by Grażyna; and in (9a) the word is ambiguous between both these interpretations. It is important to note that the readings in (b and c) are required by the context given in these sentences and that (9a) is ambiguous because the context provided is not sufficient enough to clarify the situation in favor of one reference over the other. (10) provides a similar set of examples, where relevant information allowing one

to infer the correct reference is contained in a relative clause following the referential noun. Both sets of examples illustrate how contexts may impose semantic restrictions and that either preceding or subsequent context, or both, may be relevant to the determination of mass or count reference. While the word *montaż* "assembly" in (10) may have a preferred reading associated with mass assembly and which should establish a preference for a mass reading of *samochód* "automobile", its presence in (10b) does not logically exclude an interpretation involving the construction of a single automobile.

The semantic conditioning involved in (9 and 10) is similar to that which also does not allow for a mass interpretation of *koszt* "cost" in the phrase *koszt budowy taśmociągu* (the) cost of (the) construction of (a) conveyer-belt: in this phrase, as with the preceding sentences, lexical definitions and the syntactic dependencies of the lexical items can be said to be the sole determinants of the implication that only one total cost is involved.

There are other instances, however, where semantic information is used which is not drawn from possibilities offered within the lexicon and grammar but rather from a speaker or hearer's personal experience of the world. One such sentence is (11), which in correspondence with (12) is linguistically capable of referring to a single bowl of soup but which experience tells us must require a mass reading for *zupa* "soup". It is not immediately obvious whether experience such as that which gives us our reading of (11) should be treated as extralinguistic semantic context or as a matter

11) Zofia je zupę codziennie.

Zofia eats soup daily.

12) Zofia czyta książkę codziennie.

Zofia reads (the/a) book daily.

of non-linguistic behavioral convention which tends to exclude certain logically possible readings allowed by the combined linguistic and non-linguistic context. While it can be argued that convention is a type of context, this article will assume that a distinction between the two can be made to the effect that convention does not always act as a base to which rules of interpretation refer but rather determines or predisposes the orientation of the interpretive process with respect to any given context. Placing (12) in different contexts, just as with the examples of *obrona* and *samochód* above, allows one to disambiguate mass and count readings of *książka*, thus reflecting the occurrence of purely contextual determination. (11), on the other hand, should be expected to maintain one preferred reading in most contexts, reflecting conventional determination in the interpretation of this sentence. This latter point will become clearer in the discussion of convention below.

Considering only linguistic context for the moment, the above considera-

tions indicate that, for Polish at least, interpretations of mass and count reference should not be attributed to the use of specific features marking nouns as to mass or count reference and, by extension, as to readings of definiteness, specificity and genericness, in the same way as one normally states the lexical properties of words by [\pm animate], [\pm human], etc. Rather late rules of semantic interpretation may determine these readings solely on the basis of context. Moreover, the fact that these features can be interpreted from context shows that they are of a different nature than features like [\pm animate], which are intrinsic to the lexical meaning of words.

The semantic restrictions which define the reference of a given singular noun may be broadly described as consisting of the logical relations holding between the lexical definitions of the words of a given text and the logical implications derived from these when viewed with respect to their syntactically defined dependencies on each other.

While limited space precludes the presentation of a full argument in this paper, an extensive examination of data similar to that given above indicates that unless specific quantifiers or determinant articles (*ten, ta, to*), pronouns (*jego* "his", *swój* "one's own", etc. - cf. (13)) or some adjectives (e.g. *każdy* "each", *ostatni* "last") and comparative forms appear in surface structure noun phrases with a noun, the interpretations of a given singular noun in Polish as mass or count is a reflection of its broad context, linguistic and non-linguistic. If quantifiers, articles, etc. are also treated as contextual determinants of the interpretation of these features, then a general claim can be made for both Polish and English that no noun or noun phrase is marked for these features in deep structure; rather readings of a noun as mass, count, generic, specific or definite are assigned by a late rule of semantic interpretation which looks at quantifiers in the immediate context of a noun in the same way as it relates the more general context to the noun. A further claim will be made here that singular noun forms in both Polish and English are intrinsically non-quantitative in reference at the level of deep structure: they do not even refer to a class of objects as a unit set but rather denote only the qualitative attributes the potential objects of a speaker's reference share. Because so-called mass or generic interpretations of singular nouns are really instances where no quantitative association is attributed to a singular noun in a given context, the semantic interpretation process claimed here to be the source of a mass or count reference of a noun is the non-assignment or assignment, respectively, of a feature rather than a choice between two alternative features.

- 13a) Janina napisała wszystkie listy piórem. SPECIFIC/NON-
 Janina wrote all letters pen-instr. SPECIFIC
 Janina wrote all letters with a pen.

b) Janina napisała wszystkie listy moim czerwonym piórem. SPECIFIC

Janina wrote all letters my-instr. red pen
 Janina wrote all letters with my red pen.

On the basis of the foregoing the rest of this paper will avoid further use of the terms "mass" and "count", preferring instead the distinction "non-quantitative" and "quantitative".² While support for the claim that mass interpretations are really non-quantitative readings and that the non-quantitative reading reflects the more basic form of the noun in deep structure is easier to find in English (see below.), the Polish examples in (14 and 15) require reference to non-quantitative singular noun forms for semantic continuity to hold between *jedna* and *która* and their antecedents.

- 14) Bogdan chce łapać $\left\{ \begin{array}{l} \text{ryby} \\ \text{rybę} \end{array} \right\}$, i w mojej sadzawce jest jedna.
 Bogdan wants to-catch $\left\{ \begin{array}{l} \text{fish-pl.} \\ \text{fish-sg.} \end{array} \right\}$, and in my pond is one
 Bogdan wants to catch $\left\{ \begin{array}{l} \text{fish} \\ \text{a fish} \end{array} \right\}$ and there is one in my pond.

- 15) Jan dał matce różę, która jest najbardziej odpowiednim kwiatem dla kobiety.
 Jan gave to-mother rose, which is most proper flower for women
 Jan gave his mother a rose, which is the most proper flower to give a woman.

Like Polish, English also makes a basic distinction between the interpretation of nouns as quantitative and non-quantitative in reference. With respect to singular noun phrases and unlike Polish English usually marks this distinction by the presence or absence of the article *a*. (Quantification can also be marked by the presence of quantifiers like *any, each, every*, etc., but this will not be discussed here. Where *the, this*, possessive pronouns, *et al.* indicate the presence of a quantitative presupposition, they do not do so directly, since they involve an additional presupposition that the quantity of referents constitutes one whole set which is qualitatively distinct from other possible referents. (See summary of uses of *the* at end of paper.) This matter, which also holds for Polish, should also be kept in mind and provides justification for the above claimed priority of *a*. Specific arguments on this also will not be given here.)

The existence of a distinction between quantitative and non-quantitative reference in English can be demonstrated by examples parallel to (14 and 15) and by examining the "abbreviated" style of English which appears in news

² This framework will also treat plural inflections as contextual determinants rather than mark nouns so inflected as quantitative in deep structure. Footnote 3 is also relevant to this.

headlines, captions, telegrams, some types of summaries and business and legal short form cf. (16) and (17), for which noun reference is interpreted much as it is in Polish.

16) Mouse trains cat to jump fence. Latter collapses on fiftieth try.

17) Signature on document enclosed will complete contract.

Also, in contrast with Polish, English shows a great deal of freedom in its ability to use singular noun forms in the formation of compound nouns (*sandstone*, *bullfrog*) and to function as adjectival modifiers (*red leather bag*, *auto club*, *hall flower arrangement*). When participating in these ways the singular noun form is normally unattached to any notion of quantity. It is important to note, however, that just as broad context in Polish is able to restrict the possible reference of a noun to one which involves the notion of quantity, English nouns functioning like adjectival modifiers and unmarked by the presence of *a* may be restricted as to reference by context. It is not difficult, for instance, to imagine situations for which *club* and *hall* in *auto club hall flower arrangement* may be so interpreted.³ The predominance of non-quantitative reference in nouns appearing in compounds and functioning as adjectives and their dependence on context, sometimes far removed from the phrase itself in which the noun occurs, are indications that for English also deep structure nouns are not marked for quantitative reference but that this is rather interpreted by a late process relating a noun to linguistic and non-linguistic environment. Where this process differs from that in Polish is the fact that English normally requires the placement of a determinant *a* in the immediate environment of a singular noun which the speaker presupposes to have quantitative reference and which does not function as an attributive qualifier of a subsequent noun within the same noun phrase. As a result, when the interpretation rule considers the broader context, it does so more as a filter, confirming the semantic cohesiveness of the sentence. While the process in Polish may also be thought of as a filtering device, it appears to be clearly more dynamic than it is in English.

CONVENTION: The conventions which function as determinants of the interpretation of quantitative reference are either linguistic or extra-linguistic conditions imposed on the use of a word. The linguistic conventions involved here tend to be language specific and restrict the readings of contexts in which words may appear to less than those which are logically, syntactically or

³ Presumably this also happens for Polish adjectives based on noun roots, but the phenomena there is not as general in as English. It is hard to imagine how a context would restrict *koński* to a quantitative reference involving one horse — cf. *końskie mięso* "horse-adj. meat" but easier for *klubowy* "club". This leads to interesting problems in the construction of lexicons.

morphologically possible. Extra-linguistic conventions are primarily matters of conditioning of interpretations on the basis of personal experience or on the basis of perceptual strategies and similarly restrict contexts and possible interpretations.

In order to illustrate extra-linguistic conventional conditioning, let us return to (10a). It turns out that this sentence does have an interpretation where *samochód* refers to a single automobile (cf. (18)). The difficulty one en-

18) Na obrazku widać kobietę przy montażu nowego samochodu, przeznaczonego tylko dla dwunastu sklepów. Przed wprowadzeniem go do sprzedaży, prototypowy samochód będzie demonstrowany po kolei w każdym sklepie przez trzy godziny.

In the picture one can see a woman assembling a new automobile marked (for sale in) only twelve stores. Before being placed on sale this prototype automobile will be demonstrated in each store, one after the other, for three hours.

counters in obtaining this reading on first seeing (10a) is due to a general psychological process, called a perceptual strategy, by which persons tend to interpret any situation they encounter in the simplest way possible and within the most minimal framework the context will allow. Only if this minimal interpretation fails when applied to the larger context is the first interpretation revised or discarded. (Cf. T. Bever (1970) and A. Newell and H. Simon (1972) for a more detailed description of strategies.) Strategies are matters of convention. In addition to them a person's own familiar associations with the object of reference work to provide a contextual base which general strategies draw on when determining preferred readings. To the extent that these associations function as a base for the strategy they also constitute convention.

Some evidence given below indicates that language accommodates its use of words to conform to the preferences established by perceptual strategies.

Any noun in English or Polish is theoretically capable of both quantitative and non-quantitative reference. However, both languages not only make use of the fact that some words, mainly because of the nature of the object they refer to, appear so frequently in life situations requiring one type of reference that in order to avoid possible confusion where the opposite reading is required, they prefer to restrict the use of some nouns exclusively, or primarily, to one context. This does not result in a strict division between quantitative and non-quantitative nouns but rather a continuum, with abstract nouns like *wolność* "freedom", *zdrowie* "health", *malarstwo* "painting", etc. and concrete mass nouns like *drób* "poultry" and *beton* "concrete" at one end, nouns which are always quantitative — *szachy* pl. "chess", *warcaby* pl. "draughtsman" — at the other and the bulk of the language's vocabulary falling at various points in between (cf. (19–21)), where *zupa* shows quite a bit of freedom in being

able to appear with either quantitative or non-quantitative reference in contrast to the more limited flexibility of *beton* and *jabłko*).

- 19) Jemy $\left\{ \begin{array}{l} \text{zupę} \\ \text{zupy} \end{array} \right\}$ przy każdym obiedzie.
 We eat $\left\{ \begin{array}{l} \text{soup} \\ \text{soups} \end{array} \right\}$ with every lunch.
- 20) Jeden rodzaj betonu używa się do budowy gmachów, a drugi do zaprawy. Oba $\left\{ \begin{array}{l} \text{rodzaje betonu} \\ \text{?*betony} \end{array} \right\}$ są produkowane przez tę fabrykę.
 one type of-cement uses itself into construction of-buildings, and second into mortar. Both $\left\{ \begin{array}{l} \text{types of concrete} \\ \text{?*concretes} \end{array} \right\}$ are produced by this factory.
 One type of concrete is used for the construction of buildings and the other for mortar. Both $\left\{ \begin{array}{l} \text{types of concrete} \\ \text{concretes} \end{array} \right\}$ are produced by this factory.
- 21a) (Preferred) Zielone jabłka lepiej się gotują niż czerwone.
 green apples better themselves prepare than red
 Green apples are better for cooking than red.
- b) Zielone jabłko lepiej się gotuje niż czerwone.
 green apple better itself prepares than red
 A green apple is better for cooking than a red one.

These examples, as with (11), may be treated as instances of purely linguistic convention, but in general they can often be related to extra-linguistic associations and conventions of behavior. The clearest examples of pure linguistic convention seems to be the restricted quantitative form of nouns like *szachy* (pl.) "chess", *warcaby* (pl.) "draughtsman", other *pluralia tantum* and contextual restrictions like that on the following example: The expression *mieć dobre serce* "to have (a) good heart" is semantically capable of reference to one's healthy heart, yet Polish associates the abstract meaning of *serce* so closely with this expression that interference from this association creates a strong preference for the abstract sense in (22a), where physical reference is also logically possible, and the near exclusion of *dobrze* in (22b), (22c), uttered with reference to a sportsman, shows that *dobrze* may be used with the meaning "in good condition" or "healthy" in other contexts.

- 22a) Chcemy, żeby ludzie, którzy mają dobre serce, pracowali u nas.
 we-desire, that-be (conditional) people, who have good heart, work at us
 We desire that people who have (a) good heart work with us.
- b) Kiedy chce się dużo ćwiczyć, ważnym jest, żeby mieć $\left\{ \begin{array}{l} \text{?*dobre} \\ \text{zdrowe} \end{array} \right\}$ serce.

when it-wants itself a-lot to-exercise, important is, that-be (conditional) to-have $\left\{ \begin{array}{l} \text{?*good} \\ \text{healthy} \end{array} \right\}$ heart

If one wants to exercise a lot, it is important to have a $\left\{ \begin{array}{l} \text{?*good} \\ \text{healthy} \end{array} \right\}$ heart.

- c) Jego lewa noga nie jest tak dobre jak dawniej.
 his left leg not is so good as before
 His left leg is not as good as it used to be.

The foregoing distinctions between contexts and conventions and between quantitative and non-quantitative references of nouns also holds for English, although the specific ways in which syntax, semantics, extra-linguistic context and conventions restrict the interpretation and use of nouns are not always identical for each language. Divergencies in this respect will not be discussed here but should be obvious if one compares the Polish and English sentences given as examples in this paper.

CONTRAST AND QUANTITATIVE REFERENCE. In general non-quantitative nouns are inherently semantically contrastive — in the sense that they refer to one class of attributes (and only indirectly the objects sharing those attributes) and assert this reference against the background of other possible classes of attributes (and objects). How severe the contrast of classes is depends on the range of possible referent classes allowed by the context in which the noun is uttered. In (23), for instance, the range within which *pociąg* "train" is contrasted is limited to modes of transportation; in (24), where an overt contrast of *student* "student" and *nauczyciel* "teacher" occurs the range is much more limited: two classes, provided the context outside of (24) does not require an expansion of the context to include rector, administrators, *et al.* The English examples parallel those in Polish. The observation of this phenomenon is important, because class

- 23) Chcemy jechać pociągiem.
 we-want to-go train(instr.)
- 24) We want to go by train.
- 25) To sprawozdanie jest ważne zarówno dla studenta jak i nauczyciela.
 that report is important equally for student as also teacher
- 26) The report is equally important for both student and teacher.

semantic contrasts of this sort are weakened and are less dynamic in quantitative interpretations, where they share equal weight with numerical contrasts (one or several objects against an indefinite quantity). A consequence of this finds expression in the conventional preferences of English and Polish: unless the given context defines a limited range of contrast, quantitative

referential uses of nouns are preferred. Conversely, the more apparent a contrastive context is, the more likely it is that an unmarked, non-quantitative noun may be used. The obvious exceptions to this are where other linguistic conventions intervene — as where a noun is normally associated with a non-quantitative reading and has no plural form (cf. (1)) and where, especially for Polish, no non-quantitative equivalent is used (*warcaby* (pl.) “draughtsman”, *spodnie* (pl.) “pants”, etc.) or other forms of expression are preferred — (*dużo ptaka* ⇒ *dużo ptactwa* “a lot of bird”; *mięso z konia* ⇒ *końskie mięso*). Where context allows an apparent choice between non-quantitative and quantitative forms (e.g. generic unmarked singular (*dużo jajka*) v.s. generic plural (*dużo jajek*)), preference normally falls to the latter, apparently because language tends to preserve non-quantitative use for contrast. It is this phenomenon which explains the unacceptability of the nonquantitative singular noun in the English examples (27a) and (28a) and their acceptability in the (b) versions even where specific objects may be known to be referred to.

- 27a) We have taken $\left\{ \begin{array}{l} \text{a train} \\ * \text{ train} \end{array} \right\}$ most of the time we have travelled.
- b) We have taken train and bus (both) most of the time we have travelled.
- 28a) $\left\{ \begin{array}{l} * \text{ Bird} \\ \text{A bird} \\ \text{Birds} \end{array} \right\}$ attacked Clair when she was jogging through the marsh.
- b) $\left\{ \begin{array}{l} \text{Bird and gnat} \\ \text{A bird and a gnat} \\ \text{Birds and gnats} \end{array} \right\}$ attacked Clair when she was jogging through the marsh.

While this hypothesis seems to hold generally, it needs a great deal of refinement and testing before it can be applied to a thorough analysis of English and Polish with the ultimate aim of teaching the use of articles in English. In particular, those contexts which are considered by each language to be contrastive environments which are limited enough to allow for the use of non-quantitative singular noun forms are not always the same and need to be defined.

Three instances where Polish uses the instrumental case, for example, provide a limited enough range for the occurrence of non-quantitative interpretations of the instrumental noun (29 — 31), but English allows unmarked singular nouns in only one of these, unless the context is restricted even more, as in (32). (32b) shows that the use of a different preposition, one which has a much more limited function as an instrumental marker, may narrow the context sufficiently, just as the overt mentioning of two classes does.

- 29a) Bogdan studiuje, żeby zostać adwokatem.
Bogdan is-studying, that-be (conditional) become lawyer-instr.
- b) Bogdan is studying to be $\left\{ \begin{array}{l} \text{a lawyer} \\ * \text{ lawyer} \end{array} \right\}$.
- 30a) Tomasz jest jakby doktorem dla nas wszystkich w biurze.
Thomas is as-be (conditional) doctor-instr. for us all in office
- b) Thomas is doctor to all of us at the office.
- 31a) Olga napisała wszystkie listy piórem.
Olga wrote all letters pen-instr.
- b) Olga wrote all her letters with $\left\{ \begin{array}{l} * \text{ pen} \\ \text{a pen} \end{array} \right\}$.
- 32a) Olga wrote all her letters with pen and ink.
- b) Olga wrote all her letters in pen.

Two other contexts reflecting differences between English and Polish are given in (33 and 34). In these sentences Polish *gwiazda* “star” and *sauna* “sauna” may have non-quantitative, generic readings, yet English requires the presence of the quantifier *a*. In (33) only the plural can be used to achieve a generic reading. Note again, however, that overt contrast in English does allow for non-quantitative singulars:

- 33a) $\left\{ \begin{array}{l} \text{Gwiazda daje} \\ \text{Gwiazdy dają} \end{array} \right\}$ nam nocą światło.
 $\left\{ \begin{array}{l} \text{star gives} \\ \text{stars give} \end{array} \right\}$ us night-instr. light
- b) $\left\{ \begin{array}{l} * \text{ Star} \\ \text{A star} \\ \text{Stars} \end{array} \right\}$ gives us light at night.
- 34a) Będąc w saunie, ważnym jest, żeby (się) odprężyć. being in sauna, important-instr. is, that-be (condit.) (Pro-reflexive) relax (infin.)
- b) When one is in $\left\{ \begin{array}{l} * \text{ sauna} \\ \text{a sauna} \end{array} \right\}$, it is important to relax.
- 35a) Both star and apple falls, but one falls from the heavens, the other from a tree.
- b) Whether in sauna or out of sauna, it's important to relax.

While the difference in (33) may be partly due to differences in the ability of subject noun phrases in general in each language to take non-quantitative readings, although normally both prefer to assign sentence initial nouns quantitative references. Note that the plural forms are preferred in (33) for both languages, conventional associations peculiar to the nouns involved must be taken here as the primary factor limiting the acceptability of non-quantitative reference in English. This is indicated by (36), when compared with (33b), and, especially, by (37), where it is shown that within the

(36) Pudding gives us refreshment at night.

37a) Będąc w {łóżku }
 { * łóżkach }
 { miłosnym uścisku }
 { miłosnych uściskach }
 { kłopotcie }
 { kłopotach }
 { * trudności }
 { trudnościami }

żeby (się) odprężyć.

being in {bed }
 { * beds }
 { loving embrace }
 { loving embraces }
 { trouble }
 { troubles }
 { * difficulty }
 { difficulties }

that-be (condit.) Pro-reflexive relax

b) It's important to relax when in { * beds }
 { bed }
 { ? a bed }
 { (a loving embrace) }
 { loving embraces }
 { loving embrace }
 { (trouble) }
 { * troubles }
 { * a trouble }
 { (difficulty) }
 { * difficulties }
 { ? a difficulty }

same context different words reflect varying degrees of preference as to which forms (unmarked singular, marked singular or plural) can be used to communicate a generic reading. (In the English examples of (37b) it should be noted that when no additional context is given which might require quantitative reference, given a choice between plural quantitative and singular non-quantitative nouns, speakers lean towards the singular form. This particular preference is due to semantic and syntactic contextual properties rather than to convention.) While *sauna* shows a generally more restricted ability to appear without a quantitative determinant in (34), where it is compared with words from different semantic classes, with respect to words of the same semantic

type it also holds a relative position: in (38) it appears to be less restricted than other words similar in meaning, indicating that convention is indeed involved.

38) Even {sauna }
 { a sauna }
 { * bath }
 { a bath }
 { * hot house }
 { a hot house }

Since it was claimed earlier that semantic contrast is important to the acceptability of non-quantitative readings, it should be shown that it is a degree of contrastive difference that accounts for the appearance of undetermined *sauna* in (38) versus its quantification in (34), so that it cannot be concluded that convention alone is what determines the difference here. Evidence for this is obtained by noting that under normal intonation greater assertive value is given to final constituents in phrases, clauses and sentences, so that if the noun phrase containing non-quantified *bed*, *embrace*, etc. is expanded to include a subsequent prepositional phrase, the noun within the prepositional phrase should shift the burden of contrast from *bed*, etc. to itself and require quantification of the earlier noun (39) shows this to be in fact the case.

39) It's important to relax in { * bed }
 { a bed } of daisies.

It would be good at this point to state explicitly all the factors involved in the determination of whether the interpretation and/or use of a non-quantitative noun is acceptable or not. Summarizing those factors discussed to some extent above, we find four: first is the ability of singular noun forms to take generic interpretations — an ability they have due to the fact that quantitative interpretations of these forms are not intrinsic to them; second is that the conventions of Polish and English and the non-linguistic conventions of behavior and association speakers of these languages bear allow a particular form (e.g. *gwiazda* or *star*) to appear and for it to be interpreted as non-quantitative; third is the degree of contrast (specifically, class contrast as defined by attribute) associated with this noun by its syntactic position in the sentence and its semantic content; and fourth, the fact that everyone operates on a basic, non-linguistic perceptual strategy that, as defined above, assumes that the information obtained in a given perception is perceived in terms of one's familiar experience and associations and then generalizes the information so interpreted to as broad a scope as possible. The last conditioning factor is fundamentally different from the other three, if only for the reason that the effect of the first three is absolute: they establish specific sets of possibilities of language use and interpretation, while strategies represent preferences only.

(A parallel distinction is required between conventions which determine choices in an absolute way — defining grammaticality on the linguistic level — and those which may be broadly described as stylistic.) One's familiar associations with words and the general linguistic and non-linguistic contexts in which they are normally used may place limiting factors on the generalization of noun interpretations and uses. At the very least they do so by preferring a restricted, quantitative reading in sentences like (40), while allowing the non-quantitative reading as an unlikely option until further context

40) Jablko spada z drzewa.

apple falls from tree

{ An apple is falling from a tree. }
 { ? * Apple { is falling } from a tree. }
 { falls }

necessitates a definite choice for one interpretation and the exclusion of the other. The linguistic (or non-linguistic) conventional restriction of words to different degrees of attachment to exclusive quantitative or non-quantitative usage discussed above may overlap or coincide with those restrictions created by familiar associations (i.e., by one's active knowledge of the world and of the categories used by one's language and culture). But this conventional restriction is considered to be essentially different in that the associations people have in common due to their living in modern industrial societies or due to universal characteristics of man are not parallelly reflected by identical linguistic conventions in their respective languages in an absolute manner. While all persons supposedly would know that apples normally appear in quantities and are countable, individual objects, it does not necessarily follow that all languages should include quantitative reference in their definition and/or marking of the word for apple.

(To clarify these ideas, it should be noted that these notions differ from Whorf's hypothesis about the relations holding between language, culture and the world. For Whorf the categories and associations provided by language largely define what familiar associations a person has ("linguistic determinism"). Categories and associations are static until the word is assigned a new meaning through (gradual) linguistic change. In this paper multiple associations, derived from experiencing many different aspects of an object in many different contexts, linguistic and non-linguistic, hold for both the object and the word. Except where restricted by convention, the meaning of a word, its categories and their hierarchical arrangement, is not static but is dynamically related to the context at any given moment. A constant set of associations is involved in all uses of a word, but the particular reference of a word in a given context is not to the total set of associations but to one of many potentially salient

arrangements of associations. For Whorf the total constant set is always referenced; while some associations are more salient than others, salient ones remain salient and the hierarchical relation holding between associations is constant and independent of context.)

The relationship holding between associations and perceptual strategies is that perceptual strategies are limited by associations and select preferred interpretations from among those interpretations which are logically possible within the grammar of the language. The preferred interpretation always stands the chance of being the wrong one, but for the limited context on which the strategy operated it is always acceptable.

Strategies, when examined with respect to their role in assigning interpretations, are dependent on linguistic (and nonlinguistic) conventions and therefore cannot violate them. A speaker, in using a language, is aware of the fact that the hearer uses perceptual strategies for interpretation and also associates certain contexts and words with preferred or, in some instances, exclusive readings. Because of this, the speaker may choose to take advantage of these associations by using noun forms whose associations will provide a more explicit track for the strategy of the hearer to follow in interpreting. Therefore, if a generic interpretation is desired for *jablko* 'apple' in (40), the speaker will prefer the quantitative, plural form *jablka* in concession to those conventions and associations which limit the non-quantitative interpretation of *jablko* here. In some situations linguistic convention and linguistic context may not leave the speaker any choice: the selection of a logical possibility other than that allowed by the type of linguistic convention discussed so far — such as the use of *in sauna* in (34b) — is ungrammatical. Not considered in our discussion is that area where language applies restrictions to syntactically and semantically possible constructions in particular contexts rather than to the language as a whole — the area of style.

To return to the interpretation of *gwiazda* 'star' in (33): the third and fourth conditions mentioned above as relevant to the acceptability of a non-quantitative interpretation, i.e. degree of contrast and perceptual strategy limited by familiar experience — are to some extent interdependent. This is evident when (33) is compared with (41), where a non-quantitative reading is also applicable to *gwiazda* but much less acceptable. The contrastive framework of (41b) improves the situation, but not to such an extent that a speaker would assign equal acceptability to the use of the singular noun form along with the plural form when a generic interpretation is desired. The reaction of Polish speakers, when asked to account for the variations in the acceptability of such sentences compared with others is that, however one may describe familiar experience, stars and their properties are not as familiar an experience as are dogs, horses and even elephants. These latter are definitely capable of nonquantitative interpretation in sentences like (42 and 43).

- 41a) Gwiazda spada z nieba.
star falls from sky
Preferred: Gwiazdy spadają z nieba.
stars fall from sky
A star falls from the sky.
- b) Zarówno gwiazda jak i jabłko spadają, tylko że jedno z nieba a drugie z drzewa.
equally star as and apple fall, only that one from sky and other from tree
Both star and apple fall, only one from the sky and the other from trees.
- 42) Pies i koń są wiernymi przyjaciółmi człowieka.
dog and horse are true friends of-man
Dog and horse are true friends of man.
- 43) Słoń żyje w Afryce.
elephant lives in Africa
The elephant lives in Africa.

Speakers here do not distinguish between familiarity due to personal encounters (of the third kind) with the objects referred to and more frequent experience with linguistic contexts where, due to either semantic and/or syntactic peculiarities of the contexts where stars are mentioned or conventions which hold *gwiazda* more closely bound to quantitative usage than they do for *słoń* "elephant", *pies* "dog", etc., but frequency of encounter, both linguistic and non-linguistic, is felt to condition one's ability to interpret singular forms non-quantitatively. In addition some of the above example have shown that a more obvious degree of semantic contrast loosens the restrictions imposed by familiar experience and enables one to generalize the interpretation of reference to the general non-quantitative scope the singular form inherently bears.

The interdependence of perceptual strategy and contrastive context can also be seen in another way. Primarily due to work initiated by the Prague School, the interdependence of a word's position with respect to a sentence's syntax and word order and its ability to convey assertion has long been noted. On the basis of such studies it should be expected that singular nouns in near sentence final position should show a greater tendency to take on non-quantitative interpretations than those in sentence initial position. One parallel bit of evidence, though on the phrase level, was given above (i.e. (39)). On the sentence level it is brought out by the obvious class-contrastive nature of *list* "letter" in (44a) in comparison with (44b). One would expect that if singular noun forms are basically non-quantitative and sentence final positions are generally class contrastive, this would lead to the general use of singular

non-quantitative forms at the end of generic sentences like (45 and 46). Instead it seems that quantitative noun forms are strongly preferred in such sentences and non-quantitative forms considered ungrammatical. Even in (44a) speakers infer that despite class contrast *list* 'letter' also refers to only one letter, and the English equivalent (44c) requires the presence of the quantitative determiner *a*.

- 44a) *Zdziwiłbym się, gdyby Bogdan mógł napisać list.*
I would be surprised, when-be (condit.) Bogdan could write letter
- b) *Zdziwiłbym się, gdyby list mógł być napisany przez Bogdana.*
I would be surprised, when-be (condit.) letter could be written by Bogdan.
- c) I would be surprised if Bogdan could write a letter.
- d) I would be surprised if $\left\{ \begin{array}{l} \text{(the)} \\ \text{a} \end{array} \right\}$ letter were written by Bogdan.
- 45a) *Człowiek ma $\left\{ \begin{array}{l} \text{stopy (pl.)} \\ \text{? stopę (sg.)} \end{array} \right\}$ a jeż $\left\{ \begin{array}{l} \text{łapki (pl.)} \\ \text{? łapkę (sg.)} \end{array} \right\}$.*
man has $\left\{ \begin{array}{l} \text{feet} \\ \text{foot} \end{array} \right\}$ and hedgehog $\left\{ \begin{array}{l} \text{paws} \\ \text{paw} \end{array} \right\}$
- b) *Man has $\left\{ \begin{array}{l} \text{feet} \\ \text{*foot} \\ \text{a foot} \end{array} \right\}$ and a hedgehog $\left\{ \begin{array}{l} \text{paws} \\ \text{*paw} \\ \text{a paw} \end{array} \right\}$.*
- 46a) *Kot je $\left\{ \begin{array}{l} \text{myszy} \\ \text{*mysz} \end{array} \right\}$.*
cat eats $\left\{ \begin{array}{l} \text{mice} \\ \text{*mouse} \end{array} \right\}$.
- b) *A cat eats $\left\{ \begin{array}{l} \text{mice} \\ \text{*mouse} \\ \text{? a mouse} \end{array} \right\}$.*

The possible reasons for this phenomenon will require thorough study if one wishes to provide a description of those situations where English articles are used or not used; but since (47 and 48) show that the words involved here are not subject to a general conventional restriction preventing the occurrence of their non-quantitative form, the reasons must be those related to semantic context and restrictions imposed by experience on the language's choice of forms in order to prevent possible confusion when a perceptual strategy is applied.

In particular, three associations, the first non-linguistic, the second two including both linguistic and non-linguistic experience, seem to be involved: a) the fact that, although a language allows for non-quantitative reference, the predicate attributes of a class are normally thought of in relation to concrete objects — the more closely the information in a sentence matches a person's experience of a large number of objects of the kind referred to by

the noun phrase containing a singular noun form, the greater the preference for a non-quantitative interpretation. (49) shows that when a sentence contradicts one's general impression of cats and mice, quantitative reference is the most

47a) Jaka książkę chce Irena? (Książkę jakiego rodzaju chce?)
what-kind book wants Irena?

b) What kind of book does Irena want?

48a) Stopa i łapa są wariantami ewolucyjnymi.
foot and paw are variants evolutionary.

b) Foot and paw are evolutionary variants.

49a) Czarny kot nie je myszy.
black cat not eats mice

b) $\left\{ \begin{array}{l} *Black\ cat \\ A\ black\ cat \end{array} \right\}$ doesn't eat mice.

likely interpretation. b) That of quantitative relations holding between objects of one class and those of another (e.g. the one-to-many relations existent in our knowledge that each man has two feet or a hedgehog four paws or that one cat is thought of as eating more than one mouse), and in contradiction to which a tendency to associate words as much as possible with actual objects could assign interpretations of one leg, one mouse, etc. to singular noun forms where vagueness of context or contrast allows for this. c) A tendency to preserve count reference once a context establishes it (cf. (50)). In (51), Polish's exclusion of **stado słonia* is dependent on a conventional restriction specific to words of the semantic type *stado* belongs to; a similar restriction in English accounts for the use of *daisies* in (39). Here language has adopted a preference for quantitative forms in order to provide better orientation for perceptual and interpretive processes. Polish is apparently more conservative than English in that it seems to prefer plural to singular noun forms and quantitative singular to non-quantitative singular interpretations in conformity with these associations more so than English.

50a) Słoń żyje w Afryce... Tak, ale $\left\{ \begin{array}{l} słoń\ żyje \\ słonie\ żyją \end{array} \right\}$

także w Indiach.

elephant lives in Africa.... yes, but

$\left\{ \begin{array}{l} elephant\ lives \\ elephants\ live \end{array} \right\}$ also in India

b) $\left\{ \begin{array}{l} The \\ An \end{array} \right\}$ elephant lives in Africa.... Yes, but

$\left\{ \begin{array}{l} the \\ *an \end{array} \right\}$ elephant lives } also in India.
elephants live

c) Słonie żyją w Afryce... Tak, ale $\left\{ \begin{array}{l} słonie\ żyją \\ ?\ słoń\ żyje \end{array} \right\}$

także w Indiach.

elephants live in Africa.... yes, but

$\left\{ \begin{array}{l} elephants\ live \\ ?\ elephant\ lives \end{array} \right\}$ also in India

d) Elephants live in Africa.... Yes, but

$\left\{ \begin{array}{l} elephants\ live \\ ??\ the\ elephant \\ *an\ elephant \end{array} \right\}$ lives also in India.

51a) Czy widziałeś $\left\{ \begin{array}{l} słonie \\ słonia \end{array} \right\}$ w ogrodzie zoologicznym?

Tak, widziałem całe stado $\left\{ \begin{array}{l} słoni \\ *słonia \end{array} \right\}$.

whether you-saw $\left\{ \begin{array}{l} elephants \\ elephant \end{array} \right\}$ in garden zoological?

yes, I-saw whole herd of $\left\{ \begin{array}{l} elephants \\ *elephant \end{array} \right\}$

b) Did you see $\left\{ \begin{array}{l} elephants \\ (the)\ elephant \end{array} \right\}$ at the zoo? Yes,

I saw a whole herd of $\left\{ \begin{array}{l} elephants \\ (? *the)\ elephant \end{array} \right\}$.

Earlier discussion has shown how linguistic conventions providing either absolute or context-dependent restrictions on the non-quantitative and quantitative use of particular words are important as well in the choice of noun forms.

This paper has so far outlined a general distinction between quantitative and non-quantitative interpretations of nouns and indicated that the non-quantitative reference is the basic one. The first part of the paper has shown that linguistic context and conventions restrict the interpretation and use of singular noun forms. Most important to a contrastive analysis of English and Polish with respect to the use of articles in English is the fact that English marks contexts where singular nouns are to be interpreted quantitatively by the presence of the article *a*, while Polish depends on other, broader contextual factors. In the second part of the paper conventional and contextual elements relevant to this description were further defined. While the non-quantitative interpretation of nouns appears to be basic, the semantic context, linguistic and non-linguistic, in which a singular noun is placed determines its interpretation. From the point of view of speech production, a speaker is not only aware that contexts determine interpretation but also that the use of nouns is conditioned by conventions of language and of behavior. Where the

grammar of the language allows options in the choice of quantitative and non-quantitative forms of a given noun, the speaker may base the choice on knowledge of preferred associations with the word and its forms and knowledge of strategies persons use in interpreting.

In order to provide a more adequate base for teachers who are teaching English article usage, linguistics should especially direct research to those linguistic conventions which (a) associate some words more closely than others with quantitative references and which (b) establish a hierarchy of contexts according to their ability to imply contrastive reference. Both types of conventional restriction come together in a function which allows an increasing number of words at the quantitative end of the spectrum to be used non-quantitatively in proportion to the degree of contrast apparent in a given context.

A couple of brief remarks are needed to relate the above discussion of singular nouns to the general use of plural noun forms and to the use of the article *the*.

Once the above mentioned determinants give preference to the use of quantitatively interpreted noun in a given situation, the choice of whether a singular or plural noun form will be used is largely dependent on whether one or many objects are being referred to — except where the so-called generic use of these noun forms is involved (cf. (52 and 52)). Choice between these forms seems to be stylistic: that is, based on a particular semantic and syntactic context. Some of the factors involved in stylistic determination have been mentioned in the preceding discussion.

- 52) $\left. \begin{array}{l} \text{Kot je} \\ \text{Koty jedza} \end{array} \right\} \text{myszy.}$
 $\left. \begin{array}{l} \text{cat eats} \\ \text{cats eat} \end{array} \right\} \text{mice}$
 53) $\left. \begin{array}{l} \text{A cat eats} \\ \text{Cats eat} \end{array} \right\} \text{mice.}$

In general the article *a* functions as a determinant of a noun whose referent object is treated as a single subset, not attributively different from other members of the set, and with which object the hearer is presumed to be unfamiliar. Where the object of reference is considered to be either a subset or a set unto itself capable or reflecting attributive differences in contrast with other (sub) sets of objects, the speaker uses the article *the*. Knowledge of the existence of the set on the part of the hearer may or may not be associated with the possibility that the speaker can refer to the object as an exclusive set. (54), for instance, could not be uttered if the hearer did not already know that crime exists in Detroit. On the other hand, a speaker may simply assert that a given object of reference constitutes an attributively

54) The crime is what bothers me about Detroit.

unique set, as in (55 and 56), or physical properties (57) or convention (58) may define a given object as an exclusive set or subset with qualitative characteristics distinguishing it in relation to another object of reference.

- 55) *The crime* is that this information was purposely delayed so that we could not act.
 56) Variety is *the spice* of life
 57) X and Y together function as *the nucleus* of a group.
 58) We are on $\left. \begin{array}{l} \text{the} \\ *a \end{array} \right\}$ wrong track.

The notion of a subset being attributively different from other members of a larger set is required to cover instances like (57), a nucleus being a natural subset of a group, and noun phrases such as *the Rocky Mountains*, which assumes a general class "mountains" — or, rather, assumes that mountain ranges belong to a unique set — in which the single subset exclusively defined by the predicate "Rocky" is included.

There are some characteristics which Polish *ten, ta, to* share in common with English *the*, but these require a separate paper.⁴

- a) Ta fabryka wiele produkuje.
 det. factory much produces
 This factory produces a lot.
 b) Fabryka ta wiele produkuje.
 factory det. much produces
 The factory produces a lot.

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⁴ Dr. Jerzy Weina has pointed out to me that the postnominal use of this determiner in Polish should in particular be examined: cf. (a and b).