A note on two dogmas in pragmatics

Andrzej Boguslawski

University of Warsaw, ul. Opaczewska 25 m. 33, PL 02-372 Warszawa, Poland

1. Introduction

In this short article I wish to discuss certain solutions to the question of how best to account for two well known and widely debated specific linguistic phenomena. Both of them display some common characteristics. The expression domains where the phenomena of usage I shall be concerned with can be observed include, first, competitive quantifying words all and some (of) in English (as well as their counterparts in other languages), and second, numerals denoting integers.

Note that what I have in mind while speaking of the word some (of) is not the bare English word some which may mean ‘having some quality/qualities or other which is/are not to be specified currently’ and can be used with nouns in singular as well (cf., e.g., before some time), a word that can be exemplified with the following utterance:

(1) He saw some birds of a very strange kind there (maybe these were all living birds of that kind).

In this kind of use some has quite different counterparts in certain languages than in the “partitive” sense I am interested in here: e.g., in Polish, (1) would be expressed by using the indefinite pronoun jakies’ in the place of some (singular jakis’ and its counterparts for other genders and cases), rather than niektóre (plural only; its English counterpart is some (of) with nouns in plural); there is a profound difference between the two expressions.

The solutions adopted by most contemporary scholars in their statements or more detailed accounts and studies concerned with the indicated expressions are largely uniform, at least in their basic premises.
What is common to the two groups of words is that they are approached by most investigators as having to undergo very special secondary pragmatic interpretative operations before they acquire their ability to function in the simple way they do, moreover, to so function in full harmony with the pedestrian intuitions of both educated and uneducated language users most of whom, for their part, perceive the words as by no means problematic, cumbersome or mysterious.

2. Some (of) and all (of)

The general view of the two items, normally classed as a kind of quantifiers, a view which is almost universally endorsed (Gazdar, 1979, Horn, 1989, Levinson, 2000 are among the most influential representatives of the ideas I am addressing) can be summarized as follows. The two items are said to form a scale where the “universal quantifier” all is its “strong” member, and some, its “weak” member. Its “weakness” lies in the fact that it does not exclude truthful applicability of its “strong” counterpart to the same class of things, persons or events it itself happens to refer to. In the end, it is just the mere absence of the word all (in a text where the word some appears instead) that allegedly triggers in the audience a quasi-inferential process whereby the concept ‘some (of)’, which is undeniably cognate to ‘all’, gets purely contextually “strengthened (in its information content)”, or “narrowed down”, so as to pragmatically exclude the idea, otherwise deemed quite reasonable, of the relevant set embracing all the elements in speaker’s purview that display the characteristic s/he pays attention to. It must be emphasized in particular that the object of interpretation briefly referred to as some quite commonly includes very different occurrences which are given a summary and unitary account: thus some people, some of us (and other concatenations with pronouns), some students, some of my students, etc., are within the overall range of expressions the “scalar” exegesis is meant to match. No clear separation of some of has been entertained; and this may even be seen as being based on a reasonable motivation: e.g., some of us, people, are lazy entails some people are lazy with basically the same reference and communicative intention (the only difference lies in the fact that the former expression additionally carries the rather trivial reminder that ‘people’ include us all). It will also be remembered that as the form some of is not opposed in a simple way to the bare some, so is the bare form all easily interchangeable with all of. As a matter of fact, reservations concerning the inapplicability of the “scalar interpretation” to some of or all of are practically unknown.

Interestingly enough, this kind of approach is in no way paralleled by a plausible similar view that would apply to such words as whole and part. That is to say, it has occurred to no one to claim that in the sentence

(2) He drank a part of the content of the bottle.

the word part can normally be understood as referring to the whole of the content and is limited, in the eyes of the hearer, to a smaller amount of liquid owing exclusively to a certain inferential procedure (a procedure s/he would implement) which is apt to be released, in particular, by the absence of the expression the whole in the same place of the sentence. Rather, one is ready to assume that what is denoted as part is necessarily limited to a smaller portion of an object than the same object as a whole. Even more must be said: this “necessity view” has always been, ever since grey antiquity, a standard example of the most trivial truths a priori. It is true that there is the term improper part applying, among different subsets of a class under consideration, to the set equal to that very class; but this term is merely an item in a special technical vocabulary; and then, it contains, quite significantly, the modifier improper; it does so even though the part in question indeed is, in set theory or in mereology, reasonably taken to be a “part” among all other kinds of part, in some sense, a part on a par with all kinds of part. Where a whole undergoes a process which affects also parts of the whole, one of course is entitled to say that both some part and, moreover, the whole was affected by it; but the expression a part (proper) of . . . can in no way have the same reference as the whole of . . .

A frequent argument in favour of the widespread approach to some and all as it has just been described is, oddly enough, the use of the adversative construction some, but not all which is looked upon as in a way licensing both some and all in the function of referring to the same thing (cf., e.g., Noveck and Sperber, 2007). This, however, is a very poor argument. To say the truth, this is no real argument at all.

Consider, again, the relation between ‘whole’ and ‘part’. Clearly, a sentence such as

(3) He drank a part, but not the whole of the content of the bottle.

is absolutely normal, but it does not say that the whole of the content and the part of it actually drunk by the subject is or might be the same amount of the liquid in question. Just the contrary is the case. Mutatis mutandis, the same thing is valid for utterances such as

(4) He’s a colonel, but not a general.

and for innumerable other cases of adversative constructions with a similar “competitive” relationship between its members. Why should this kind of interpretation be inapplicable to the relationship between some (of) and all?

If we now pass on to conjunctive constructions, we can see that proceeding from some (of) to all (of) normally amounts, in a striking contrast to the interpretation explained above, to a correction of what has previously been stated in terms of some. Cf. examples of utterances or exchanges below, some of which cancel a possible idea that only some items are such and such, that idea being put forth, for instance, in an earlier yes-no-question concerning objects covered by a some-construction, cf.:
Are some building blocks in this box yellow? (notice that the more normal form of the question using the polarity expression *any* has nothing to do with our quandary):

(5) Some of these building blocks are yellow, even all of them are yellow.
(6) – Some of these building blocks are yellow.
   – Wrong. All of them are yellow.
   – Yes, I now see. Not just some of them are yellow, all of them are.

Clearly, the word *some* of in (5) or (6) refers to a subset proper of the entire set in question (exactly like, *mutatis mutandis*, the word *a part of* discussed above) and it does so from the very start, without any roundabout way being used.

Complementarily, an explicit limitation (e.g., by using the word *only*) of the set concerned to a subset proper of a certain set is possible with *some*, but not *all*:

(7) Only some of these building blocks are yellow.
(8) * Only all (of) these building blocks are yellow.

The same contrast can be observed on parallel sentences with *at* to the *strictly opposed* terms of the relevant distinction: “partitive” vs. “non-partitive” (otherwise there could be no hierarchy of possible coverage in the first place). A viable approximation of the hierarchy involved can be represented in terms of the following conditional: *if it is not the case that all* [e.g., building blocks in that box are yellow], *then not all, but also not none* [of them are yellow], with an additional metatextual reservation inherent in the indicative that if the speaker does not say that the protasis is untrue (thus allowing for the really exhaustive character of the feature in question, without, however, stating it). Now, should the apodosis of that conditional, which corresponds to *some*, amount in fact to the alternative *not all, but also not none, or all* (given the stipulated flexibility of *some*), the whole of the conditional, and thus, the expression *at least some* as well, would turn out to represent the uninformative tautological entailment of a necessarily true alternative *not all or all* (given the generally accepted existential presupposition). This necessary alternative would be said to be entailed by the clause *it is not the case that all* …

But, clearly, just any clause in the protasis logically entails that very apodosis which is tautological (just any clause entails it on a par with all other tautologies which, as is well known, are entailed by just everything). This result, however, is in a crass contrast with the undeniable informativeness and syntheticity of both the expression at least some and its conditional interpretation as formulated above.

All the above considerations contradict the assumption that *some* of can be coextensional with *all* (when it applies to a definite set). The point is that if *some* could possibly refer to the whole set, the adversee construction only some, but not all (notice that here we need not use the form *some* of) would be fully O.K. with only. But it is not. Cf.:

(9) ? Only some, but not all, building blocks in that box are yellow.

(9) is questionable because of the striking superfluity (pleonastic character) of the addition *but not all* which at the same time enlivens, owing to the connective *but*, the idea that ‘some’ does not logically exclude ‘all’; notice that the simple *not all* (without *but*) would be better here: it would just reiterate, in a certain way, the content of ‘some’. The word *only* does not create a context that would narrow down the allegedly neutral some (of): it is admissible with the latter, unlike with *all*, in the first place, owing to its inherent *negation* of ‘all’. Once again, the behaviour of *some* (of) confirms its unbridgeable contrast to all.

It is interesting that the above remark is not valid, quite significantly, for our introductory example (1); (10) below can only limit the domain of what “he” saw, but it cannot narrow down the set of “birds in question” to a proper subset of the set, viz. the subset of the birds he saw:

(10) He saw only/only saw some birds of a very strange kind there (maybe these were all birds of that kind).

This yields further support to the distinction concerning the word *some* that I have made in the Introduction.

On the other hand, the bare *some* very often is used to cover in a manifest way what is otherwise covered by means of *some* of. If the query about who in a population of students has passed a certain exam is answered: “Some girls have passed it.”, it would be pointless to further ask: “Have all of them passed the exam?” (although one of course can show doubtfulness by uttering a *competitive* claim: “I bet all the girls have passed it”). Or consider someone who sees a burning house where s/he is certain one person or more are present; assume, furthermore, the observer carefully avoids any statements that would inexacty render the state of his/her mind; if s/he alarmed people trying to be as brief as possible and crying: “Somebody is in that house.” (this allows one to infer that one person or more, but not all people, are inside the house). Would it then be appropriate to appease the person by saying: “Perhaps what you are saying is true because no one is in that house.”? Hardly.

Please cite this article in press as: Boguslawski, A., A note on two dogmas in pragmatics, Journal of Pragmatics (2010), doi:10.1016/j.pragma.2010.02.008
Just to revert for a while to the above observation concerning concatenations of *some* of *with only*, we may notice that the observation is matched by the following fact of another kind. A statement emphasizing a relatively large size of a set marked for a given feature (its not being smaller, which is otherwise a good possibility) can apply to a set referred to as *all*, whereas it cannot so apply when a set is referred to in terms of *some* (*of*). This circumstance also speaks in favour of the claim of a radical contrast between *some* (*of*) and *all*. Cf.:

(11) ? Simply *some* of these building blocks are yellow (nothing less than that).

(12) Simply *all* of these building blocks are yellow (nothing less than that).

The statement in (12) is in fact simple; its counterpart in (11), however, is *not*: it certainly involves both objects that are yellow and objects that are *not* yellow in the domain in question; also the parenthetical remark in (12) reasonably reinforces the positive appraisal of the scope proper to the set in question whereas it is completely inappropriate in (11).

In our consideration it is necessary, above all, to pay attention to the fact that there is a salient difference between the word *some* of and the word *exist* or *there is/are*. Cf.:

(13) – There are yellow building blocks in this box.
– Yes, that’s true. But the whole truth is that *all* of them are yellow.

Here, the expression *there are* indeed fails to make a distinction between reference to the set as a whole and reference to just any subset proper of the set.

To my mind, one can assuredly say that it is precisely the influence of the customary (but off-handed) identification of the role of the word *some* with that of the so called existential quantification (using expressions such as *exist*, *there is/are*), an identification suggested by the standard training in logic, that has been the source of the idea of “scalarity” of the words *some* (*of*) and *all* (recall the famous “logical square” which happens to be explained, e.g., by the label *all* for the “corner” A [‘not-Fs do not exist’] and by the label *some* [rather than *exist*] for the “corner” I in “subalternation” to A [‘at least one F exists’]).

There is, furthermore, a test that is even more reliable than the observations made so far. It shows with much clarity that the relationship between our two items is, from the very beginning, one of a purely semantic contrast, a contrast which stands in no need of being aided pragmatically to arise in the first place. The test I have in mind turns on the embedding of the items concerned under the construction based on such words as *namely*, (slightly archaic) *to wit* or the expression *viz*. This construction should be seen as relating the left-hand side term to the right-hand side term as the necessary condition of the latter which, complementarily, plays the role of one of the possible sufficient conditions of the former; significantly, the reversal of the terms normally yields an unacceptable result (for a detailed account of the Polish counterpart of the English words *for example*, see Boguslawski, 2004). In the examples below I shall use the written expression *viz.* (to avoid the rare to *wit* or *namely* which is much more restricted in usage than, e.g., the absolutely free German *nämlich* or Polish *mianowicie*). Cf.:

(14) The audience’s understanding of the word *someone* to the exclusion of the audience him/herself (in spite of the fact that the audience is “someone” as well) is a typical case of Gricean conversational implicature, viz. generalized conversational implicature./\ The audience’s understanding of the word *someone* to the exclusion of the audience him/herself (in spite of the fact that the audience is “someone” as well) is a typical case of generalized conversational implicature, viz. Gricean conversational implicature.

Now, the generally accepted view of the difference between *some* and *all* has to be understood as providing for the role of the necessary condition as proper to the former (“weak”) member vis-à-vis the latter (“strong”) member, thus ultimately making ‘all’ a sufficient condition of ‘some’. But this logical relationship is by far not borne out by the relevant *viz.*-constructions; and this is valid for both imaginable directions of the relationship. Cf. the following incorrect examples:

(15) * Yellow is the color proper to some of those building blocks, viz. to all of them./\* Yellow is the color proper to all those building blocks, viz. to some of them.

(16) * They have checked on some of those bank accounts, viz. they have checked on all of them./\* They have checked on all those bank accounts, viz. they have checked on some of them.

The matter is quite different for true existential statements coupled with the corresponding universal generalizations, cf. the following examples which are fully licit (but the reversal of the relevant terms is illicit):

(17) There *are* yellow building blocks in this box, viz. all of them are yellow./\* All building blocks in this box *are* yellow, viz. there are yellow building blocks in this box.

(18) There *are* bank accounts that they have checked on, viz. they have checked on all of them/all the bank accounts have been checked on by them./\* All the bank accounts have been checked on by them, viz. there *are* bank accounts that they have checked on.
My conclusion is that the adequate use of the concept 'some of', as it is expressed by means of the English word *some (of)*, by means of the German word *einige (von)*, by means of the Polish forms *niektóre/niektrzy (z)*, etc., is by far not a simple existential necessary condition of a universal statement materializing the schema ‘all Fs are G’, a schema which can be represented in a more detailed way as ‘(existing) Fs that are not G do not exist’. Rather, the indicated expressions transmit the content ‘Fs that I have in mind are G; I am not saying this [viz. G] about all Fs’. This kind of content admittedly makes it possible for the speaker to subsequently accept, in view of new evidence, the improved claim embodied in the relevant universal statement. But at the same time the content just explained contrasts in a clear way with an imaginable current generalizing claim. The point is that a universal statement made in an utterance amounts to saying that *G is proper to all Fs*. But precisely this is incompatible with an avowed current *withdrawal from saying* the same thing. And that kind of withdrawal is unequivocally communicated in *some-of*-statements, as has been evidenced by my observations above.

A further conclusion is that, in my view, the widely accepted doctrine of special pragmatic procedures governing the “narrow” use of *some (of)* is an unnecessary complication in the description of language. It is the decoding of the simple semantic load of *some (of)* that exhausts what hearers do when they process sentences or phrases based on this expression. Speakers, in their turn, in the capacity of senders of the relevant pieces of information follow suit by just making use of this very fact of common straightforward understanding (a fact that is also observable when they themselves play the part of hearers). Even the otherwise most valuable tool of generalized conversational implicature, cf. example (14), contrary to what, e.g., Levinson (2000) claimed when he was dealing with the words *all and some*, is superfluous in our domain.

What have I said can hardly come as a surprise. The point is that the *basic, semantic* instruments of language are wholly sufficient in hosts of down-to-earth cases, and in particular, quite expectedly, in that fragment of discourse which we have been reflecting on here. To see this, it is sufficient to recall the trivial truth that the distinction between something covering *exactly* the numbers that I have in mind is, after all, that suggesting an exact correspondence to the respective number as it is ostensively associated with the word at hand, without, however, the association being held to warrant incorrigibility of such an answer).

It is important to bear in mind my above qualification to the effect that it is *bare* numeral phrases that present the problem just mentioned. Phrases with special means of expressing either “exactitude” of the given ostensive numerical value or the opposing feature of “openness” for possible *alternative greater or smaller values are not problematic in the same way. Cf., e.g., sentences such as *He killed exactly (no more and no less than) ten/more than ten/less than ten terrorists*; here, hesitation is either explicitly excluded (by the word *exactly* or other similar expressions) or, contrariwise (with overt alternatives), explicitly invited. Thus, there is nothing to quarrel about here.

As a real problematic example with a *bare* numeral, I may point to the sentence *He has killed ten terrorists.*: the sentence remains true even if the subject killed, all in all, 15 terrorists. This happens in particular when the numeral is unstressed (cf. also: *He HAS three children*, where “he” may be the father of exactly 5 children). But this last circumstance is by no means necessary. If, for instance, the point of interest is that of how many terrorists have been killed by whom and of who has reached a “round” number of those s/he has killed (disregarding possible “extra” victims), it may be quite reasonable to use the sentence *He has killed TEN terrorists.* (with the phrasal stress falling on the numeral) while at the same time retaining immunity to rightly being blamed for making a false statement.

According to the by now prevailing view, the last mentioned type of use semantically provides exclusively for the existence of objects whose multiplicity reaches the designated number, without, however, deciding on whether or not the qualitative class that can be thought of as pointed to by speaker is broader than that. It is in such cases that certain pragmatic inferential strategies allegedly allow for a conclusion (a conclusion which is, in the last resort, uncertain, fallible) that the relevant class is exactly as numerous as suggested by the numeral currently used, rather than stronger in number (this is, once more, a “narrowing” interpretation).

In this kind of approach the same analytic deficit can be observed, again, as in the interpretation of the quantifiers dealt with in the preceding section: one does not pay sufficient attention to the contrast between, on the one hand, explicit
existential statements with numerical indications and, on the other hand, statements which no doubt carry a logical implication of the existence of a certain number of definite objects, but whose main point is not existential.

Consider the following pair of sentences:

(19) There are five cats in the cellar.
(20) He found five cats in the cellar.

Sentence (19) only allows for some loose guesses about the full number of all cats in the cellar as being equal to 5 or being greater than 5 (the speaker can be held responsible for the possibility of reaching the number 5 when counting the cats in the cellar, but in no way can s/he be held responsible for the falsity of the number being the last station in that count). By contrast, sentence (20) distinctly suggests that there were exactly 5 cats at the place in question and in any case that the overall number of the cats found by the speaker neither exceeds 5 nor is smaller than 5. It of course goes without saying that existential statements can carry, in addition, a specific guarantee that the statement provides for the exact number of objects in a given class, cf., e.g., There were exactly 5 cats in the cellar. Sometimes special constructions designed for that very purpose are used where the crude word exactly or another similar device is avoided. As an example, I can point to Slavic constructions with the prepoused thematic nominal phrase in the genitive and the rhematic numeral phrase (the gender, if necessary, is neuter); cf., for instance: Pol. Któów w piwnicy było pięć ‘cats-[gen., plur.] in the cellar were-[sing., neuter] 5 in number’, with the sense ‘all in all, 5’. Still, purely existential statements without such additional ingredients (which are apt to assure the audience that nothing but the exact number is at stake) contrast in a distinct way with other statements in that the former ones (cf. (19)), so to speak, openly fail to exclude materialization of higher numbers than the one immediately indicated in a given sentence, whereas sentences illustrated with (20) are strongly biased towards expressing exact numbers proper to some sets as these are suggested by the current text and context.

A purely existential interpretation of bare numeral phrases in sentences that are not overtly existential in their structure faces yet another objection. That kind of interpretation boils down to the claim that the semantics of numerals merely provides for the unilateral negation of non-equiponderance of a given class of objects with the power indicated by the numeral, the unilaterality of the negation lying in the fact that the class merely cannot be smaller than the respective numerical class. That is to say, this interpretation falls back on such negation as is most regularly expressed by means of the forms not less than (n) or at least (n). But this assimilation of sentences that are not overtly existential with formal existential ones (concentrating precisely on the numbers) flies in the face of reality. The point is that there is an undeniable difference between such sentences cited below as (21), on the one hand, and (22), with no less than (n) or at least (n), on the other:

(21) I have already printed 100 copies.
(22) I have already printed at least/no less than 100 copies.

Sentence (22) explicitly points to the alternative of the exact number and some higher number; the second, the higher, member of the alternative becomes particularly vivid or salient here. No such effect is present in the previous sentence, sentence (21). It of course allows for the possibility that the speaker has printed, up to the same point in time, more than 100 copies of the same stuff. This is because the speaker may just pay attention, at the time of the utterance, to the initial part of the printed material only which amounts to 100 copies. But the speaker of (21) is silent on that point: perhaps s/he has printed only 100 copies, perhaps more.

To gain more insight in the phenomena of our present concern, it will be, I think, quite illuminating to have a close look at a recent presentation of the problem and its proposed solutions in the renowned volume on pragmatics edited by Burton-Roberts (Burton-Roberts (ed.), 2007).

The editor begins his own analysis by admitting no less than three interpretations of N (=numeral): apart from the two interpretations discussed above, he approves, following Carston (1991), of the interpretation ‘at most N’ as a further possibility. His relevant examples read:

(23) I must pare that article down to sixty pages.
(24) We’re allowed thirty days’ holiday a year.

I shall first reject, in advance of my further consideration, this additional interpretation. Texts such as illustrated with examples (23)–(24) merely make it possible to guess that the speaker might have resorted to some alternatives, e.g., “60 pages or less”, “we can spend 30 days or less on holidays”. But the illustrative sentences as they stand do not represent any such alternatives; they just state the exact maximum number of admissible pages or the allowance for the exact maximum number of days (of all numbers, 30!). Burton-Roberts presents here something that can only be seen as an ordinary misunderstanding (which Carston indulged in earlier). It results from a superficial impression the cited sentences may give whenever one does not pay attention to their relevant details (such as the fact that it is, e.g., not the number of days spent by someone on holidays that is described in (24), but the number of days set up as a limit in a legal document: the limit is not an alternative of numbers; it merely implies a possible alternative in an implementation of the exact ruling in question, an implementation perhaps carried out by someone at a certain point in time).
Let me now dwell for a while on Carston’s (1998), option which she explained by using the example ‘3’ and on a discussion of it in Burton-Roberts (2007). Carston proposes that the word *three* encodes the concept *X [THREE]* whose use consists in a pragmatic choice among the three possibilities of specification of X: ‘exactly’, ‘at least’, at most’. Burton-Roberts rightly points out that, with Carston’s proposal, the problem of how to interpret or to define the numeral itself arises again with all its force. “X” cannot serve as a constituent of a required and plausible definition. Thus, in his opinion which I share, no viable solution to the real object of the quandary, viz., in this case, the number 3 and the word *three*, has been offered.

For his part, the author submits the following interpretation. According to the general vision he accepts (Fodorian in its origin), there is, in (Fodorian) “language of thought” (LoT) and the only semantics he allows for, viz. the semantics of LoT, “the concept denoting the number 3 [neither a smaller nor a greater one]”. He registers it, in his special notation, as *[EXACTLY THREE]*. As for the real word *three*, deprived, according to the same conception, of any kind of semantics (in the sense of the term semantics he adopts), it is merely endowed with a convention of representing (or “suggesting to the audience”) an arbitrary numerical concept in the realm of LoT where the concept 3 (making part of that very “language” [LoT]) functions as one of its constituents (i.e., as a constituent of that arbitrary concept which may apply to a certain set that is currently being considered).

I shall not go into Burton-Roberts’ overall view of natural language inspired by Fodor, the view of it as a collection of purely phonological instruments that, so to speak, sketchily direct the audience’s attention to (perhaps ramified) conceptual spectres” in the primarily and independently given “LoT”. This view is just a belated renewal of archaic Aristotelian psychologism with its idea of purely communicative role of expressions (as “means of presentation of thoughts that exist independently”). But I am not going to discuss this problem at length here and will prescind Burton-Roberts’ linguistic-philosophical ideology.

His view of the specific facts of discourse we are concerned with in this section is no less inadequate; and it is so on quite independent grounds. Consider the utterance:

(25) Alex HAS three children.

(25) may suggest to some audience a guess that Alex has altogether at least 3 children, i.e., 3 or more than 3; in some other situation the hearer will entertain the idea that Alex has, all in all, 3 children. But in both cases a certain set of “his children” referred to by the speaker is, in hearers’ apprehension, taken (on the assumption of the truth of the sentence) to be a three-member set, not: at least a three-member set. The point is that this apprehension is very different from how the utterance:

(26) Alex has at least three children.

is understood. Although in the case of (26) hearers can make similar guesses as in the case of (25), they can make them against an altogether different background, in a completely different framework, viz. in a framework of a numerical picture which is presented to them in a full shape and is by no means loosely suggested to them: it is presented to them in the precise shape of the alternative of the numbers 3 and >3 (i.e., >3). True enough, this alternative applies, again, to a certain set of “his” children. But obviously, in a pragmatic version which imposes itself as an unrivalled one, it applies, of all possible sets, to the set of *all* his children.

What is, then, the adequate solution to the question of how numerals are understood?

A solution that respects all the circumstances described above is the one that is the closest to the normal basic intuitions of all speakers. It reads: a bare numeral phrase states in purely semantic terms, regardless of all appearances, the equality of the power of a given non-arithmetic set with the power of the relevant set of successive elements of the arithmetical series as they are used in counting (i.e., the arithmetical set corresponding to the given numeral). It will be remembered that these successive elements fail to be genuine numerals, i.e., items capable of functioning as sentential constituents: even though they normally (but not always) are materially identical with numerals (as far as their sound or graphical shape is concerned), they serve as purely technical instruments of setting up universal and paradigmatic one-to-one correspondences between objects in chosen pluralities (see Boguslawski, 1966, for a detailed discussion). The important additional point to be stated here, a point that deserves special attention, is as follows: the non-arithmetical set in question may, as a matter of principle, have arbitrary boundaries, according to speaker’s current interest and intention. In other words, the set can be described as ‘those objects that I have in mind’ (where I stands for the speaker of a given utterance).

The boundaries of such non-arithmetic sets, in accord with the above characterization, need not correspond in a canonical way to a concept that could be made objectively precise on the basis of current lexical and grammatical material. The boundaries in question may characterize either such a canonical set or some subset proper of it, depending on various specific suggestions supplied by the context.

The adequacy of this description is reflected in the enormous flexibility of “bare numeral phrases”. This flexibility shows when it comes to application of the phrases to possible specific sets that the speaker may have in mind. Among other things, it shows in the prevailing bias (but only bias) to read the phrases as pointing to the sets that can occur most easily to the hearer, i.e., sets suggested by the objective lexicogrammatical stuff with its designated referents. These are salient “full” sets of objects to which attention is directed in standard and natural ways. It is for this reason that a sentence such as *He has three children* is apprehended by default, in the absence of special contextual indications, as referring to the full set of “his” children. But one has to bear in mind that the sentence is by far not barred from referring to some subset proper of the set.
4. Additional arguments for the straightforward interpretation of numerals

There are four additional arguments in favour of the solution just explained. (It is worth pointing out that the very last sentence I have used can illustrate the adequacy of the solution: I am far from denying the possibility that the set of "arguments in favour of the solution just explained" includes some further arguments; however, those arguments I am referring to presently, are in fact equal to the set \{1, 2, 3, 4\} of "instruments of counting".)

First, the arithmetical sets serve as devices for an ultimate determination of the power of sets; moreover, they serve as the unique kind of such device. One cannot continue to state the equality of sets in infinitum; the answer to the question how many? must at some point be given in terms of a numeral rather than any other name of a set. And at the same time the arithmetical system is in fact a means of achieving this goal which is in universal and constant use.

It is for this reason that there is a significant feature that sets apart a comparison resulting in statements of equiponderance between a "coincidental", non-numerical, set and a numerical set, on the one hand, from a comparison that is only concerned with some "coincidental" sets and some others of the same sort, on the other hand. The latter kind of comparison uses the form as many as whereas the former one avails itself of simpler forms: forms with the direct insertion of a numeral (and without the addition of as many as); cf., e.g., pupils in this class are as many (in number) as the ones in that class, but: pupils in this class are thirty (in number). (With emphasis, however, where the expression no more . . . and no less . . . is used, the forms are similar in both cases, cf.: pupils in this class are no more and no less in number than the ones in that class; pupils in this class are no more and no less than thirty (in number). Still, there is another, simpler form as well, viz. a form with no more and no less in postposition [following the numeral]: pupils in this class are thirty (in number), no more and no less [otherwise, such an addition is possible with the as-many-as-construction, too].

Second, we may revert to the relationship between necessary and sufficient conditions of states of affairs which we have touched upon in the preceding section, as well as to the corresponding test discussed there. The observation below based on that discussion and concerning, this time, numerals is quite pertinent to the interpretation of bare numerals with respect to the contrast between the concept 'exactly n' and 'not less than n'.

It is evident that the content of a numeral is taken by speakers to be a sufficient condition of the concept 'all' as applied to the objects concerned. Our test using the properties of the expressions namely, to wit or viz. demonstrates this in a clear way. Consider the following example:

\[(27)\] All the relevant bank accounts, viz. fifty, have been checked on.

The left-hand side of the viz.-construction which comprises the word all shows the necessary condition of its right-hand partner fifty. The conclusion is that the numeral showing the sufficient condition of the full set (of the “relevant bank accounts”) mentioned in the left-hand side of the construction establishes the power of that full set. The important point is that sentence (27) transmits an altogether different information than the sentence

\[(28)\] All the relevant bank accounts, viz. at least fifty, have been checked on.

In (28), the sufficient condition of the full set of objects mentioned in the left-hand side of the construction is merely the alternative of 50 and >50.

Let me add that concatenations of numeral phrases with comments that amount to the statement that the relevant power of the set concerned neither goes beyond that implied by the numeral nor fails to reach it (while being deemed at least relatively large) confirm the basic correspondence of numerals to the expected exact power of the full sets that are entertained; cf.:

\[(29)\] He has only three children.

\[(30)\] He has as many as three children.

Third, the fact that the two kinds of expression: first, n, second, no less than n, just to put it in this schematic way, are close to each other with respect to what is to be described (I emphasize that in no way do I intend to deny their mutual affinity), is apt to incline speakers to metonymically abridge the no-less-phrase by substituting the short n in its place. They very often do so by saying, e.g., I'll take one hundred dollars with me (which of course does not amount to an obligation not to take, say, 110 dollars), To get that kind of leave, you have to have been turned 40 (where persons at the age of 50 are by no means deprived of the benefit), and so on. Such a metonymical abridgement is made possible and quite safe (from the point of view of the utterance’s truthfulness) by the circumstance that whenever one is not certain that the power of the set in question is greater than the relevant set of numerical expressions, one can comfortably set the real number at a slightly lower n such that the risk of a substantial distortion of the real number is negligible while at the same time the risky choice leaves a great many sensible particularized truths (such as ‘no less than n 1, n 2, . . . ’) intact and the overwhelming majority of possible falsehoods that can be thought of are likely to be absolutely innocent (in a way similar to what happens where systematic “minimal” falsehoods [not: lies!] are involved; cf., e.g., utterances such as He came at five. vs. the fully truthful He came five past five.).
Note that the above situation is completely different from the one where a possible downward correction (with regard to real or possible estimates) in the form of no more than/at most takes place; cf., e.g.:

(31) He made at most 10 errors in his composition.

Whereas the speaker’s attitude in (31) can be described as rather moderate or cautious, his/her attitude in a sentence without the word at most, whether with the word at least or without it, would be understood as either much more critical or much more favourable, depending on the subject matter and the system of values involved. Even though the sentences

(32) He made 10 errors in his composition.
(33) He made at least 10 errors in his composition.
(34) He made 10 donations.
(35) He made at least 10 donations.

differ from each other, too, as far as their impact is concerned (there is little doubt about that), the difference is distinctly more subtle than that between either member in both pairs ((32)–(33); (34)–(35)), on the one hand, and (31), on the other. Generally speaking, the constructions with the word at most aim to eliminate possible illusions, possible distortions of the reality, i.e., whatever can be assumed or imagined by someone in spite of the fact that it does not exist at all. (Interestingly, there are metonymical uses of numerals replacing possible at most n constructions as well, cf., e.g., the question Can I give you 50 dollars for this set of stamps? asked in the hope that a smaller price would do and followed by the answer Yes, I only need 40. What is at stake here is dispelling a possible illusion on the owner’s part that the limit of $50 can be replaced by a higher sum of money. Notice that the real meaning of 50 is ‘50’ here, no more and no less, as marking the limit, exactly as, mutatis mutandis, in Burton-Roberts’ examples (23)–(24).)

In a clear contrast, the counterparts of at most constructions based on no less than or at least emphasize positive states of affairs. They try to cancel possible doubts about the presence of certain items and to insist on what, so to speak, “in any case exists”; in this, they represent the same basic tendency as the simplest sentences with a direct indication of a definite, non-alternative numerical value.

Fourth, when a mere approximation to the number expressed by the numeral is being made, what is taken into account as the basis of that approximation is the entire set of the successive numbers in the arithmetical series and only such a set; a set that can be defined as ‘not less than n’ or ‘not more than n’ cannot serve as that kind of basis, on pain of an infinite regress and, as a result, of a lack of any closed expression. Should n in such cases substitute a possible concatenation not less than n, we would end up in strings like not less than not less than not less than . . . (in infinitum) or not less than not more than not less than . . . (in infinitum), etc. Meanwhile no such absence of any sense can correspond to the well known absolutely meaningful complex expressions comprising n (i.e., expressions I have envisaged here, such as not less than ten errors).

Therefore, a bare numeral in itself must be equal, as far as its meaning is concerned, to the representation of the relevant set as equiponderant with the corresponding set of the successive elements of the arithmetical series. Its meaning is only analytically equivalent (not equal) to the concatenation not less and not more than n (any attempt to define n as equal to such a concatenation would involve us in an infinite regress similar to the one indicated above).

5. Conclusion

My final conclusion, similarly as in section 2, is that the widely accepted doctrine of special pragmatic procedures governing the use of numerals is an unnecessary complication in the description of language. It is the decoding of the simple semantic load of numerals with their one-to-one correspondence to the sets of elements of the arithmetical series that nearly exhausts what hearers do when they process sentences or phrases based on numerals.

The only complications involved in the functioning of numerals (compared, in particular, to the record simplicity of the features proper to the functioning of some of and all equal) are as follows. One has to reckon, first of all, with the extremely general contextual relativity of what particular sets are envisaged by speakers in given contexts (where they nonetheless qualify the sets, each time, as deserving the exact numeral label they currently use [because of the equiponderance of the sets with the relevant sets of successive elements of the counting series]). Second, another extremely general regularity is at work here: that embodied in metonymy – as an abbreviation of a linear series of contiguous elements in a syntactic string by a part of it. Thus, I am far from denying the role of pragmatic factors in processing numerals. I have only tried to circumscribe it properly.

References


Andrzej Boguslawski (b. 1931) is professor in the University of Warsaw. He has been faculty member at the same University since 1951 (from which he had also graduated as a student of Slavonic philology). He has devoted a number of studies to various issues in linguistics (semantics, syntax, morphology, pragmatics, and other subdisciplines) as well as in philosophy and methodology of science. In the last decade and a half he has published, in particular, the following books: Word matters (Warsaw 1994), Science as linguistic activity, linguistics as scientific activity (Warsaw 1998), Aspekt i negacja [Aspect and negation] (Warsaw 2003, 2nd edition 2004), A study in the linguistics-philosophy interface (Warsaw 2007), O konieczności istnienia [On the necessity of existence] (Warsaw 2008), Semantyka, pragmatyka [Semantics, pragmatics] (Warsaw 2008).


10

PRAGMA-3127; No of Pages 10

Please cite this article in press as: Boguslawski, A., A note on two dogmas in pragmatics. Journal of Pragmatics (2010), doi:10.1016/j.pragma.2010.02.008