LITTLE WORDS
Their History, Phonology, Syntax, Semantics, Pragmatics, and Acquisition

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From “Two” to “Both”
Historical Changes in the Syntax and Meaning of Oba in Slavic

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WE MAKE THE NOVEL OBSERVATION that Old Church Slavonic (OCS) *oba*, the historical counterpart of the modern Slavic “both,” meant simply “two.” We propose an account of the syntactic reanalysis of *oba* and the accompanying change in its meaning and discuss the broader implications of our findings.

Old Church Slavonic

The grammatical descriptions of OCS (e.g., Huntley 1993; Lunt 2001) as well as dictionaries and glossaries consistently give the meaning of *oba* as “both”! This is probably so for two reasons: *oba* does mean “both” in the modern Slavic languages, and the meanings of “both” and “two” overlap and are difficult to distinguish in definite contexts that allow a distributive interpretation. Thus, whereas the contrast between *The two girls sang together* and *Both girls sang together* shows that *both* is necessarily distributive, predicates that are not obligatorily collective can mask the semantic distinction between *both* and the *two*, for example, *The two girls sang* and *Both girls sang*.

OCS *oba*, however, could not have meant “both.” First, *oba* could be used to form complex numerals, as shown in (1).² Clearly, the only semantic contribution *oba* can have in such cases is its cardinality of 2. It was no different than the other numerals from 1 to 9, which similarly participated in the formation of complex numerals, for example, *četyre na desete*, “fourteen,” literally “four on ten,” and *sedmь na desete*, “seventeen,” literally “seven on ten.”

(1) sijе *oba na desete* postъla isъ. zapovèdavъ imъ gle.
*these two on ten* sent Jesus having-ordered them saying . . .

“These twelve Jesus sent out with the following instructions . . .” (Matt. 10:5)

Second, *oba* could be used with collective predicates, as exemplified in (2), which is also an environment where *both* is prohibited.

(2) I prilèpitъ se ženě svoei . I bòdete *oba* vъ plъtъ edino.
*and will-cling REFL wife self’s and will-be two in body one*
“And he will cling to his wife, and the two will become one flesh.” (Matt. 19:5)
 cf. English And he will cling to his wife, and *both/the two will become one flesh.

Finally, *oba could be the complement of a partitive preposition, as shown in (3). Again, this is not an environment where *both is acceptable.

(3) Ky otъ obojo sъtvori voljo otyço?
which of two did will of-the-father
“Which of the two did what his father wanted?” (Matt. 21:31)
cf. English Which of *both/the two (of them) did what his father wanted?

These examples show clearly that the OCS *oba must have been simply a numeral “two.” In Codex Marianus there are forty-one cases of the use of *oba in environments such as (1)–(3), where it clearly did not mean “both.” The remaining thirteen occurrences did not distinguish between a “both” and a “two” interpretation.

In addition to the semantic arguments for treating OCS *oba as a numeral, there is also evidence from word order pointing to the same conclusion. *Oba could co-occur with demonstratives (OCS did not have a definite article), and in such cases it followed the demonstrative, as in (4):

(4) Vь seju oboju zapovëdiju. vesь zakon vь i proroci visëtъ.
in these two commandments all law and prophets hang
“All the Law and the Prophets hang on these two commandments.” (Matt. 12:24)

In English *both appears before determiners, as in *both these commandments or in Brisson’s (1998, 18) example *Both the girls went to the gym.3

In sum, both semantic and syntactic arguments suggest that *oba was a numeral. Interestingly, it was restricted to definite contexts.4 Even when *oba appeared without a determiner, its nominal phrase was interpreted as definite. Another numeral, *dva, also meaning “two,” was used in both definite and indefinite contexts, though it was more typically found in indefinite ones (ninety-seven out of one hundred uses in Codex Marianus).

The Modern Slavic Languages
The situation with *oba in the modern Slavic languages is markedly different from OCS. *Oba is found in all the modern languages in the family except Bulgarian and some dialects of Macedonian, and in all the languages that have it, *oba means “both.” In that function, *oba unambiguously marks distributive readings.

As a distributive marker, *oba is no longer found in complex numerals in modern Slavic. This is shown in (5). The only possible numeral in this context is *dva. (Examples are from a representative language from the west, east, and south branches of the Slavic family, respectively.)

(5) a. Polish
I usiadлszy, przywoл˚ał dwunastu i rzek˚ł im . . .
and having-sat-down called two-on-ten and said them
b. Russian
I sev, on pozval dvenadtsat’ i skazal im . . .
and having-sat-down he called two-on-ten and said them

c. Serbian
Seo je i pozvao dvanaestoricu i rekao im . . .
sat is and call two-on-ten and said them
“And having sat down, he called the twelve and said to them . . .”

In the modern languages, oba cannot be used with collective predicates, as exemplified in (6) and (7). Again, in this respect, modern oba differs from its OCS predecessor.

(6) a. Polish
połączy się z żoną swoją, i będą ci dwoje/*oboję jednym
will-join REFL with wife self’s and will-be these two/*both one
ciałem
body
b. Russian
soedenitsa so svoej ženoi, i dvoe/*oba stanut odnoi plot’iu.
will-join-REFL with self’s wife and two /*both will-become one flesh
c. Serbian
sjediniti se sa zenom svojom i biće njih dvoje/*oboje jedno
will-join REFL with wife self’s and will-be these two /*both one
telo
body

“(For this reason a man will leave his father and mother and be united to his wife,) and the two will become one flesh.”

(7) a. Polish
Obie kobiety przyszły (*razem).
both women came together
b. Russian
Obe zhenschchiny prishli (*vmeste).
both women came together
c. Serbian
Obe žene su došle (*zajedno).
both women are came together
“(Both) women came together.”

Last, just like both, oba cannot be a complement of a partitive preposition, as exemplified in (8). Again, recall that in this syntactic context OCS oba was acceptable.
As these examples show, in the languages that have preserved oba, it no longer functions as the numeral 2. Instead, it is a distributive quantifier corresponding to English "both." The question arises how this historical change from a numeral to a distributive quantifier came to be and what factors contributed to it.

An additional question stems from the fact that, in Bulgarian and certain dialects of Macedonian, oba was lost as a lexical item. The function of “both” is fulfilled by the phrase “and the two,” as exemplified in (9).

A distributive-marking syntactic construction is a cross-linguistically available alternative for languages that do not have a lexicalized both, for example, Greek, French, Turkish, and, of course, OCS. Moreover, it is available for any numeral, not just “two.” The exact syntactic structure used may differ from language to language, though a definite article and an additive particle, as in (9), are common elements. It is of interest to find out whether there is a principled reason behind the different history between the two groups of Slavic languages—Polish, Russian, Serbian, and others versus Bulgarian and dialects of Macedonian.

The Semantics and Syntax of “Both”

Before we present our analysis of the historical change in the meaning and syntax of oba, let us review briefly the accounts of the semantic and syntactic function of both as they have been proposed for English.

An important early account can be found in Barwise and Cooper (1981), who propose that both is a determiner with the same meaning as “the two.” However, we already know that these two expressions are not equivalent. This is also indicated by examples such as *One of both children sneezed and One of the two children sneezed, which have been used to criticize Barwise and Cooper’s account.
In response to this problem Ladusaw (1982) proposes that *both has a distributive component, which makes it impossible inside partitives and incompatible with collective predicates, as in *Both students are a happy couple and The two students are a happy couple. This idea is further developed in Roberts (1987) and Landman (1989), who argue that both is equivalent to the distributive universal quantifier each/every but with the addition of a cardinality presupposition of 2. Brisson (1998) does not analyze both as a quantifier but rather as a modifier to nominal phrases. It is licensed in the presence of a distributive operator and has the semantic function of a maximizer—it picks up the maximal individual denoted by (the rest of) the nominal phrase and disallows exceptions.

With respect to the syntax of both, it has been analyzed by Sportiche (1988), Schwarzschild (1996), and others as an adjunct to determiner phrases (DPs) that can be stranded after the DP moves, for example, The children have both seen the movie. An analysis along the lines of Shlonsky (1991) puts both in the head of a functional projection that selects the DP as a complement, while still allowing stranding after the DP moves. Doetjes (1997) and Fitzpatrick (2006) do not adopt a stranding analysis of floating both but analyze it as a VP-adverbial, composed of an adnominal both either adjoined to a null DP or in a functional projection selecting a null DP. Another type of analysis treats both as a cross-categorial modifier in the nominal and verbal domain, that is, a DP-adjunct or a VP-adjunct (e.g., Brisson 1998; Bobaljik 2003; Dowty and Brodie 1984).

Last, it should be mentioned that, as many authors have pointed out (e.g., Brisson 1998; Edmondson 1978; Progovac 1999; Schwarzschild 1996; Stockwell, Schachter, and Partee 1973), the word both in English also functions as a conjunction-reduction marker, whose presence signals strictly distributive, multiple event readings, for example, Adam both acts and directs = Adam acts and Adam directs; The idea is both new and clever = The idea is new and the idea is clever; Both Peter and Paul read the book = Peter read the book and Paul read the book.

While the floated quantifier both may be amenable to a uniform adnominal analysis, in one of its various instantiations as a stranded DP-adjunct (Sportiche 1988), or a stranded Q-head (Shlonsky 1991), or an adjunct/specifier/higher head with a null DP (Doetjes 1997; Fitzpatrick 2006), the function of both as a conjunction-reduction marker is not easily given such an analysis. Rather this use of both is a strong motivation to treat it as a cross-categorial adjunct and to extend that analysis to the use of both with nonconjoined nominals. We can conclude that both is uniformly an adjunct, to DPs or to conjunctions of various categories, and that it is associated with (a) distributivity, (b) cardinality of 2 (of individuals or events), and (c), in the case of DP-adjoined both, definiteness.

Historical Changes in the Syntax and Semantics of Oba

Returning to the previous discussion of Slavic, we can assume the structure as in (10) for OCS, where oba is a numeral with a definiteness presupposition, merging in the specifier of the number phrase (NumP). The specifier position is adopted for uniformity with complex numerals, which, we assume, have phrasal syntax. Oba lacks quantificational force of its own; it is a cardinality expression. The grammar of dva, the other numeral 2, is the same, except for the fact that D0 can be specified [definite] or not.
In Polish, Russian, Serbian, and the other languages, apart from Bulgarian and dialects of Macedonian, *oba* was reanalyzed from a numeral, a nonquantificational cardinality expression, to a quantifier associated with distributivity. Syntactically, that meant that *oba* would no longer merge as a specifier of the NumP. But does it merge as an adjunct to the DP, as posited for English, or does it appear in a functional projection selecting the DP as a complement? It needs to be noted that Slavic *oba* cannot be used in conjunction reduction structures. Rather the conjunction *i*, “and,” is used to introduce conjunction reduction in Slavic (cf. Progovac 1999). The example in (11) shows that this construction was already available in OCS.

(11) boite že sę pače. mogošćaago i dšq i tělo pogubti v ŋ Ge(enně OCS

*fear but REFL more being-able and soul and body kill in hell*

“Rather, be afraid of the one who can kill both soul and body in hell.”

(Matt.10:28b)

Because *oba* is not used with conjunctions, we propose to treat it as a specifier of a quantifier phrase (QP) head in the extended nominal projection, but we acknowledge that the alternative, adjunct-to-DP analysis, is also possible. The head of QP has a null distributive operator, a justified move, as distributive readings are possible without any overt marking. We cannot offer here a complete theory of the grammatical representation of distributivity (see, e.g., Brisson 1998; Schwarzschild 1996). Nor do we have an explanation for why *oba* had to be associated with a distributive interpretation. The syntactic reanalysis of *oba* yielded the present-day situation as represented in (12).

(12) The Modern Grammar of *Oba*
In (12) \[ \text{def} \] D is null in all the modern languages, except for the dialects of Macedonian that have \textit{oba}, where it is expressed with an overt definite article.

The fact that \textit{oba} was promoted to a higher projection, freeing up the numeral position within the NumP, is evidenced by the fact that some modern Slavic languages allow the numeral \textit{dva} to co-occur with \textit{oba}. Examples of that are given in (13). Examples like this suggest that modern \textit{oba} is directly merged as a Spec, QP, rather than first being merged as a numeral in Spec, NumP. It agrees with a Num\textsuperscript{0} specified for a cardinality of 2.

(13) a. Polish

\begin{quote}
\text{Obaj/obydwa\j} chcieli zapłacić za bilet.
\end{quote}

\textit{both /both-two wanted to-pay for ticket}

“Both (men) wanted to pay for the ticket.”

b. Serbian

\begin{quote}
\text{Oba/obadva dečaka su želela da plate kartu.}
\end{quote}

\textit{both/both-two boys are wanted to pay ticket}

“Both boys wanted to pay for the ticket.”

The position of demonstrative pronouns with respect to \textit{oba} also indicates that \textit{oba} is merged higher than the NumP. As the examples in (14) show, \textit{oba} must precede the demonstrative pronoun.

(14) a. Polish

\begin{quote}
\text{Obaj ci/*ci obaj} chłopcy chcieli zapłacić za bilet.
\end{quote}

\textit{both these/these both boys wanted to-pay for ticket}

b. Russian

\begin{quote}
\text{Oba eti/?eti oba} mal’chika khoteli zaplatit’ za bilet.
\end{quote}

\textit{both these/these both boys wanted to-pay for ticket}

c. Serbian

\begin{quote}
\text{Oba ta/*ta oba} dečaka su želela da plate kartu.
\end{quote}

\textit{both these/these both boys are wanted to pay ticket}

“Both these boys wanted to pay for the ticket.”

This contrasts with the position of the numerals, which must follow the demonstrative pronoun:

(15) a. Polish

\begin{quote}
*\text{Dwaj ci/ci dwaj} chłopcy chcieli zapłacić za bilet.
\end{quote}

\textit{two these/these two boys wanted to-pay for ticket}

b. Serbian

\begin{quote}
*\text{Dva ta/ta dva} dečaka su želela da plate kartu.
\end{quote}

\textit{two these/these two boys are wanted to pay ticket}

“These two boys wanted to pay for the ticket.”
These examples show clearly that *oba* has undergone a change: the original numeral *oba*, which at first merged in the NumP, was moved higher up. The syntactic change was accompanied by a semantic change into a distributive quantifier.

**The Motivation for the Changes**

*Oba* had a marked status in the system of numerals in OCS. It had a counterpart, *dъva*, with the same meaning (cardinality of 2), the difference being only that *oba* could be used in a subset of the syntactic environments in which *dъva* could be used (recall that although *dъva* occurred most often in indefinite DPs, it could also be found in definite DPs). Furthermore, *oba* was the only numeral with a definiteness requirement. All other numerals were like *dъva*, neutral with respect to (in)definiteness of the DP in which they appeared. Thus *oba* simultaneously stood apart in the system of numerals and was in competition with a numeral that was an unexceptional member of the system. As such, *oba* was a likely candidate for reanalysis or loss. Both of these developments occurred in the history of Slavic.

*Oba* was lost in Bulgarian and in the dialects of Macedonian in contact with Bulgarian and Greek. This path of development likely occurred due to the emergence of the definite article. With an overt article present, a definite DP could be marked unambiguously even with the numeral *dъva*, something which was not possible earlier, since the use of bare (article-less) *dъva* could not distinguish between definite and indefinite DPs. In other words, whereas previously *oba* was competing with a lexical item *dъva* for use in syntactic structures such as [definite]-specified DP as in (10), and it had the advantage of unambiguously signaling a definite DP, now it no longer had that advantage. This ultimately led to the disappearance of *oba* in the relevant language.

*Oba* was reanalyzed in the rest of the Slavic languages. None of these languages have developed a definite article, so *oba* remained the only way to unambiguously mark a DP as definite. This presumably precluded the outright loss of *oba*. A reanalysis of *oba* as a distributive quantifier was not inevitable; after all, OCS managed to do without such a quantifier. But the change fulfilled a double function—it apparently met a need, common cross-linguistically, for a distributive dual quantifier and also resolved the marked status of *oba* in the grammar.

If languages have a need for a distributive dual quantifier, then why did Bulgarian and dialects of Macedonian not develop one, reanalyzing the otherwise not needed *oba*? The answer must lie in the fact that a syntactic alternative was available to the lexical item strategy. The use of *i*, “and,” as a distributive marker was already present in South Slavic, as seen in (11) in the conjunction reduction strategy. With a definite article present, all the individual pieces of the meaning of *both* were at hand.

\[
\text{(16) and + the + two} \\
\quad \text{(DISTRIBUTIVITY marker, as seen also [DEFINITENESS] [DUALITY] in conjunction reduction structures)}
\]

The *and the n* strategy is cross-linguistically attested, and it is a general one, as it could be used with any numeral, not just 2. So, in the presence of a syntactic construction expressing exactly the same meaning, and with a wider applicability (i.e.,
not restricted to cardinality of 2), a distributive dual quantifier, a lexical item, was not developed. This state of affairs may also have been reinforced through influence from Greek, which lacked a lexical item meaning “both” but had the syntactic means of expressing this meaning through the and the n construction.

Implications for Other Indo-European Languages
The fact that OCS oba was originally a numeral and that it became a marker of distributivity later, in the process of historical change, is of consequence not only to Slavic but also to the larger Indo-European (IE) language family. The lexical item oba derives from the Proto-Indo-European (PIE) word *ambho:, with its other descendants being both (English), beide (German, Dutch), ambos (Spanish), and so on. Given that in other languages the cognates of oba are commonly understood to be distributive, the OCS facts suggest two paths of development from *ambho: to both, beide, oba, ambos, and so forth.

(17) a. distributive *ambho: → distributivity lost in OCS, distributivity regained & kept in other IE languages in Modern Slavic
   b. nondistributive *ambho: → parallel developments in the meaning of both, beide, oba, ambos, and so forth.

In order to decide which of the two pathways represents the actual development of *ambho:, we must naturally look beyond Slavic. More concretely, we need to look for the use of the cognates of oba in the numeral function in other IE languages, including the ancient ones. While careful investigation into non-Slavic IE languages is beyond the scope of this work, some preliminary evidence in favor of (17-b) can be found in Modern German and Dutch. In both these languages, as it turns out, the meaning of beide alternates between the distributive “both” reading and a numeral 2 reading. The latter reading is found whenever beide is preceded by a definite article (D. Büring, B. Schwarz [pc]):

(18) German
    Welcher von ?(die) beiden hat gewonnen?
    *Which of the two won?*

(19) Einer von ?(die) beiden wird gewinnen.
    *One of (the) both will win*

(20) Die beiden Männer haben diese zwei Frauen geheiratet.
    *The both men have these two women married*

   cf.

(21) Beide Männer haben diese zwei Frauen geheiratet.
    *Both men married the two women.* (distributive reading only)
These German examples in conjunction with the OCS data indicate that the ancestor of oba and beide, that is, *ambho: was in fact not a distributive quantifier but meant something like “the two” and that the distributive function of both, beide, modern oba, and so on was a later, parallel development in the individual languages. In other words, our finding that OCS did not have a distributive dual quantifier may in fact be a more general finding about some of the early IE languages. If this is indeed so, it will suggest that a change from “two” to “both” is a natural development for grammars.

Summary
The OCS word oba, a relative of both, beide, and so forth, was a numeral with a definiteness presupposition, not a distributive quantifier. That numeral has been either reanalyzed or lost in all modern Slavic languages. In those languages where it has been preserved, it acquired a distributive quantifier function. In languages where it was lost, it was replaced by a periphrastic construction with a more general functionality.

These findings are of importance for more than just the history of oba in Slavic. They show the primacy of grammar, in the structures it generates and the system of relationships it determines, over lexical items (oba was lost when the syntactic means of expressing its meaning became available). They also show that marked elements are susceptible to change (oba did not replace дъva, but rather дъva replaced oba in its definite use, making oba redundant and therefore subject to reanalysis).

The history of Slavic “both” also suggests that the meaning of the PIE word *ambho:, from which oba, both, and other corresponding words in different IE languages are derived, may not have had a distributive component and that the distributive-marking function of such words observed in the modern IE languages was a later development.

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1. OCS is the oldest recorded Slavic language. Although it belongs to the South Slavic branch of the family, it is thought to be sufficiently similar to, and thus a good representative of, Common Slavic, the common predecessor of all the Slavic languages (e.g., Lunt 2001, 1; Schenker 1995, 71, 185–86).
2. The data are from Codex Marianus, an eleventh century AD text of the four Gospels. We used the annotated text of the Codex in Pancheva et al. (2007), which in turn is based on the electronic edition of Codex Marianus in Jouko Lindstedt’s Corpus Cyrillo-Methodianum Helsingiense: An Electronic Corpus of Old Church Slavonic Texts.
3. The alternate order appears to be possible only in very restricted cases, perhaps dialectal, such as the both of us.
4. Morphosyntax does not distinguish between determiners and numerals. They all inflect like adjectives, agreeing in number, gender, and case with the head noun. Thus demonstrative тъ “this” had the same inflectional affixes in the dual as did oba.
5. The term “quantifier” is used rather descriptively here. English adnominal both has been argued to be either a quantificational determiner with a generalized quantifier meaning or, alternatively, a modifier that eliminates exceptions to the maximality interpretation of plural definites.
6. We assume here that the definite article was introduced before the reanalysis of *oba*. The completed development of the article is dated rather early, in the twelfth to thirteenth centuries (Duridanov et al. 1993, 555), whereas the OCS texts are from the eleventh century, so this is not an implausible assumption.

REFERENCES


