MORE ADO ABOUT **NALL*[*]

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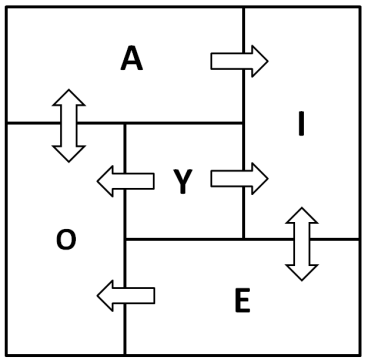
From what is hidden under the title of this squib it is but a short step to *As you like it*, in which Jacques most famously reflects upon the seven ages of man. Wouldn't Jacques – with 'c' – be in the fifth age, 'with eyes severe … full of wise saws and modern instances'?

1. O VALUES

Jacques Moeschler (2006, 2007, 2012) has worked on negation, among other things on what he calls 'Horn's conjecture' (Moeschler 2006, 2007, 2012). Except for the language, Moeschler (2007) is identical to Moeschler (2012) and similar to Moeschler (2006) and since this squib is in English I will mostly refer to Moeschler (2007). The conjecture concerns the Aristotelian Square of Oppositions. (1) represents this square in a slightly unorthodox fashion, based on van der Auwera (1996). A, O, I and E have their usual meaning. Y is the 'new' value: it is intermediate between A and E; in choosing the letter 'Y' I follow Horn (1990: 459-460). The doubly pointed arrows show contradiction (e.g. between A and O) and the simple ones entailment (e.g. A entails I). Contrariness and subcontrariness could also be marked, but I don't need this for my purpose.

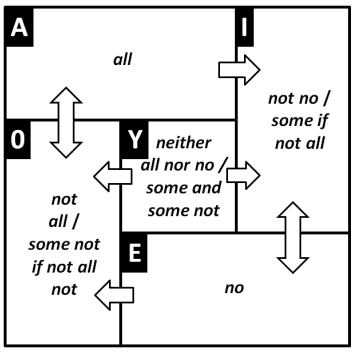
(1)



[*] Thanks for due to Mira Ariel (Tel Aviv) and to Caterina Mauri (Pavia).

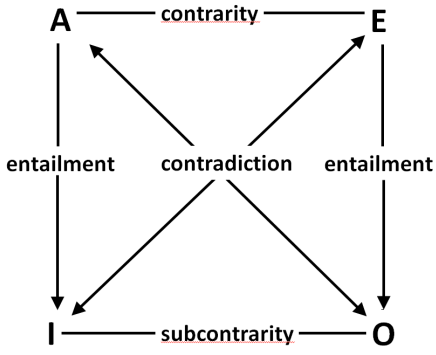
(2) shows how this square works for the quantifiers *all*, *some* and *no*.

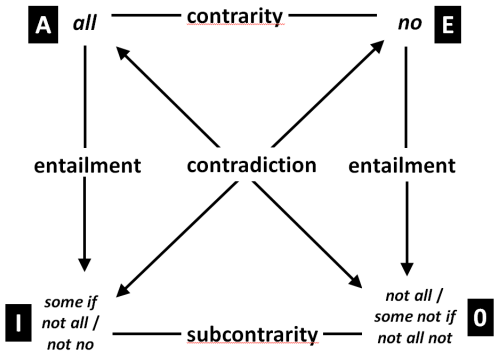
(2)



(1) and (2) show everything that the traditional squares show, but in a different way: in the classical squares, i.e. the ones in (3), the values are points and in the squares in (1) and (2) the values are cells.

(3)





With the addition of the Y cell, however, the squares in (1) and (2) show more than the classical squares. With respect to quantifiers Y represents the *some* reading in which 'some' is neither 'all' nor 'none'. In a classical Gricean analysis, this reading is a pragmatic effect of the I value 'some if not all', which is taken to be a literal meaning.[1]

With reference to Horn (2004: 11) Moeschler (2007: 3) phrases 'Horn's conjecture' as follows:

(4) Natural languages tend not to lexicalize complex values, since these need not be lexicalized.

This formulation seems very general. The point, however, is a rather specific one. It is the O value that is considered to be complex and that resists lexicalization. Moeschler's proposal is

[1] Even before this analysis became 'classical' – after the transformation of Horn (1972) into Horn (1989) – doubts were voiced (Löbner 1984, van der Auwera 1985: 110), which have now become strong counterarguments (Ariel 2004, 2006, 2013 and references therein).

partially similar to Horn's, but there is a difference. Moeschler (2007) defines a concept of calculability and then he claims that concepts whose specification is not calculable need not be lexicalized. On both accounts, however, there is an agreement that the lexicalization of O values is not necessary. Moeschler illustrates this point with the observations listed in (5).

(5)

A	I	E	O
all	*some*	*no*	**nall*
always	*sometimes*	*never*	**nalways*
both (of them)	*one (of them)*	*neither*	**noth*
and	*or*	*nor*	**nand*

We here see the impossible *nall* of the title of this squib. (5) contains only observations for English, of course. But in Moeschler (2012: 425), the French version of the paper, it is French that illustrates the point (see also Moeschler 2006: 97, where both languages are listed).

(6)

A	I	E	O
tous	*quelques*	*aucun*	**nitous*
toujours	*quelquefois*	*jamais*	**nitoujours*
les deux	*l'un*	*ni l'un ni l'autre*	**nideux*
et	*ou*	*ni*	**niet*

At first sight, the facts are clear and what we need is indeed an explanation, and one could then compare the explanation of Moeschler with that of Horn. But in this squib I will not go that far. I will essentially show or, to some extent, remind ourselves that the facts are not clear. In all fairness, the conjecture does also contain a hedge: O values would only **tend** to remain unlexicalized. Both Horn and Moeschler thus prepared us for problems.

2. LEXICALIZED O VALUES

In (5) and (6) we see a quantifier series with *all, some, …*, another one with *always, sometimes, …*, a third, dual quantifier series with *both (of them), one (of them)*, and a connective series with *and, or...* There is, however, one strongly noticeable absentee, viz. a modal series with *necessity, possibility…* For Horn this series too illustrates the absence of O lexemes (Horn 1989: xviii, 259-261; Horn 2004: 11-12), although he is a careful. Does the fact that Moeschler (2006, 2007, 2012) does not mention modals conversationally implicate that he too is aware of problems? Somewhat paradoxically, Moeschler (2007: 3) – and before him Horn (2004: 11) – phrases the conjecture with nothing other than an O term, viz. the phrase *need not*.

(4') Natural languages tend not to lexicalize complex values, since these **need not** be lexicalized.

It is, of course, true that *need not* is not a word but a phrase, but one could embrace multi-word constructions as lexicalizations too. Besides, with English auxiliaries, modal and other, *not* can contract and turn into one word, e.g. *mustn't* or *needn't.* Most importantly, the main function of the auxiliary *need* is to combine with negation and to express the absence of necessity, as in (4/4'). For the presence of necessity, the auxiliary *need* is not available.

(7) *These **need** be lexicalized.

It is true that the auxiliary *need* is a negatively polar item, which means that it is used in a wider set of contexts than direct negation, such as the question context.

(8) **Need** I say more?

But the same goes for *jamais*, a point stressed by Muller (1991: 264-267) and Hansen (2012: 79). A conditional use is illustrated in (9), a line of a song by Salvatore Adamo.

(9)

Si	**jamais**	en	un	jour	de	cafard		
if	ever	in	a	day	of	cockroach		
il	te	prenait	soudain		l'envie	de	me	revoir, …
it	you	takes	suddenly		the.desire	to	me	see.again

'If ever on some sad day a desire to see me again came over you suddenly, …'

Horn (1989: 260) is aware of the *need not / needn't* problem, considers it a 'clear counterexample' and admits that 'while quantificational O values never lexicalize, modal O values are relatively free to do so'.[2] It is difficult to quantify over the world's languages on this relative freedom, but at least in Germanic there are counterparts to English *need* (e.g. German *brauchen* or Dutch *hoeven*) and the phenomenon is certainly not restricted to Germanic (e.g. Mandarin *yóng*). Horn (1989:260) also mentions the word *unnecessary,* next to *impossible*, and notes that it is restricted to the deontic domain. That may be correct, but that does not prevent *unnecessary* from being a perfectly good lexeme, as is, which he also notes, *uncertain* (in the epistemic domain).[3] The question of why modals are different has been dealt in van der Auwera & Bultinck (2001), but this is beyond this squib. Let me just end with pointing out that modality is strange from the Aristotelian perspective in other ways too, esp. because modal expressions may be vague between A and I values, in part because they change from one to the other (van der Auwera & Plungian 1989: 100-104). English *must*, for instance, is now a necessity modal (A), but it once expressed possibility (I), and in the transition stage it was vague. Interestingly, an A or I

[2] Horn (1989: 26) adds that the modal O values only occur 'it would seem, provided there is no possibility of misinterpreting the resultant form'. But this is not correct. Southern Dutch *niet moeten* (lit.) 'not must' is ambiguous/vague between 'mustn't' and 'needn't'.

[3] Compare also Löbner (1990: 84-88), who approaches lexicalization facts from the perspective of the duality square, i.e. the more general representation of the Aristotelian square which focuses on the relations of internal and external negation.

vagueness is not totally unknown for quantifiers or conjunctions either (Haspelmath 1997: 128, Gil 1991, Ohori 2004).

3. NON-LEXICALIZED NON-O VALUES

With the remark on the lack of differentiation between A and I values I have already turned to lexicalization puzzles concerning values other than O. I will make six more points, most of them concerning quantification.

Let me start with the first lines of tables (5) and (6). Of the 3 available words in English and French, there are each time two that allow both pronominal and adnominal uses, i.e. *all* and *some* for English and *tous* and *aucun* for French. English *no* and French *quelques*, however, only have adnominal uses. It is clear from Horn (1989: 254) that the lexicalizability claim is to hold for both uses. At least for English and French, this is no problem, for they have pronominal counterparts to *no* and *quelques, viz. none* and *quelques-uns*, but this might be different in other languages. And more generally, there is no doubt that word class is an important parameter of variation. In fact, there is a growing amount of research showing that languages can easily do without any adnominal or pronominal quantification. They then do the adnominal and pronominal work adverbially, as illustrated in the Straits Salish example in (10).[4]

(10) **məkʼ^{w}**=ɬ 'əw' ŋa-t-Ø cə sčeenəx^{w}
all=1PLNOM LINK eat-TR-3ABS DET fish
'We ate all the fish' or 'We all ate the fish' or 'We ate up the fish completely'
(Jelinek 1995: 514)

So in Straits Salish none of the 5 values is lexicalized in the adnominal or pronominal domain.

Second, from a Gricean point of view, I values would be literal meanings with Y values as conversational implicatures, and even as generalized ones. One would then expect that there are going to be at least some languages that semanticized this implicature. That is, one would expect words meaning 'only some', 'only or', etc. that derive from the earlier meaning 'some if not all', 'or if not and', etc. But there is little or no evidence. One explanation, a convincing one, is that the Y values are in fact the literal meanings (Ariel 2004: 664-665) and that usually nothing else is brought in pragmatically (implicated or explicated). An interesting item, though, is the Latin indefinite *nonnullus*, also written as *non nullus*. It means 'some, several' and compositionally ('not none') it strongly suggests the I reading as a literal meaning. Cicero offers

[4] The abbreviations in the glosses are those of Jelinek's: 1 'first person', 3 'third person, ABS 'absolutive', DET 'determiner', 'NOM' nominative, PL' plural' and TR 'transitive'. LINK is a multifunctional particle, which in (10) links up and adverb and a predication. In the example chosen the quantifier is scopally vague or ‘unselective’; this is not, however, a defining property of adverbial quantification.

an example in his first Catalinarian Oration (line 30), in which the context makes clear that 'only some' is meant.

(11)

quamquam	**nonnulli**	sunt	in	hoc	ordine,	qui …
though	some	are	in	this	assembly	who

'Though there are some in this assembly, who …'

It is not improbable that *nonnulli* always has this pragmatic effect, but, interestingly, the dynamics leading *nonnullus* from 'not none' and to 'only some' is not the classical Gricean inference schema, but that of double negation, the same as the one that leads 'not unhappy' to 'neither happy nor unhappy' (cp. Horn 1991).

Third, somewhat different is the expectation that languages at least care about the distinction between I and Y values, even if they would not derive one from the other. For conjunctions, for example, this would mean that languages would distinguish between inclusive (I) and exclusive (Y) disjunction, but Mauri (2008: 48, footnotes 14 and 15, 157-161) has shown that this distinction has at best marginal relevance. When languages distinguish between different types of 'or', these are sensitive to other semantic factors, such as choice and interrogative contexts. Admittedly, 'marginal' is not the same as 'uninteresting'. In the realm of modality, there is the philosophical term *contingent*: entities will have necessary and contingent properties and when some property is contingent, it cannot also be necessary.

Fourth, the claim about the lexicalization of dual quantifiers is not convincing. I repeat the observations for English and French in (11).

(12)

A	I	E	O
both (of them)	*one (of them)*	*neither*	**noth*
les deux	*l'un*	*ni l'un ni l'autre*	**nideux*

For English it is true that A and E have dedicated lexical items and that there is no O word, but then the I word/phrase is also lacking – at least *one (of them)* is not dedicated to dual quantification at all. For French, there isn't a single dedicated word or pattern. For example, though it is a property of French to allow the definite article together with a numeral, thus giving *les deux* 'the two', which is indeed equivalent with English *both*, this construction is available for other numerals, too, and it is not, therefore, dedicated to duals.

My fifth remark concerns the E and I values. I repeat the relevant observations for English and French nominal quantifiers in (13).

(13)

A	I	E	O
all	*some*	*no*	**nall*
tous	*quelques*	*aucun*	**nitous*

For A, I and O the facts are the same, but not quite for E. For English the situation is clear: *no* is dedicated to negation and will by itself express clausal negation. For French, the facts are a little different. Though we could assume that *aucun* is indeed dedicated to negation[5], in a complete clause *aucun* will not, at least in standard written French, suffice for rendering *no*; we also need the clausal negator *ne*.

(14) **Aucun** arbitre français **n**'a été retenu pour le Mondial 2014 au Brésil.

(15) Non! **Aucun problème**!

So for French the E strategy is really (*ne*) *aucun*, something we have learned to call a 'negative concord' strategy, to be distinguished from what could be called the 'negative quantifier' strategy of English *no*. (*ne*) *aucun* is not a E 'word', but it is still an E 'construction', and as with *need not* we can embrace it under lexicalization. The point is, however, that neither the English nor the French strategy are all that common. In a world wide sample of 179 samples, Van Alsenoy (2014: 251) found the English strategy only in 11.7% of the world's languages and the French one in 19%. There are also areal and genetic biases to the frequency. The English strategy is most typical for North-American languages (Van Alsenoy 2014: 111) and the French strategy is most typical for Eurasia (Van Alsenoy 2014: 88-89). A negative polarity strategy, as with English *any,* could be characterized as an E strategy too, given that one allows negatively polar *jamais* as an E filler for the temporal quantifiers. This occurs in 25,7% of the world's languages (Van Alsenoy 2014: 251).

(16) I didn't hear **any** noise.

The most frequent strategy, however, disregarding a few marginal ones, just uses the strategy found in positive affirmative sentences, as in pseudo-English (17); it makes up for 49,2% of the world's languages (Van Alsenoy 2012: 251).

(17) I didn't hear **some** noise.

I conclude that in about half of the world's languages, the E slot is not lexicalized for nominal quantifiers. There are no comparable figures for the adverbial quantification illustrated in (10),

[5] Modern negatively dedicated *aucun* derives from a wider negative polarity use, as illustrated in the line from Jean De La Fontaine's *Le savetier et le financier* ('The cobbler and the financier').

(a) …il faisait des passages, plus content qu' aucun des Sept Sages
he made passages, more happy than any of the seven sages
'… he performed passages, happier than any of the seven sages.'

In modern French this is a highly marked relic use.

but the impression one gets from the current literature (Keenan & Paperno (eds.), 2012; Gil, Harlow & Tsoulas (eds.), 2013), adverbials do not universally lexicalize E either.

The sixth remark takes us back to the I values. We have just seen that for expressing nominal E quantification, half of the languages rely on combining negation with the I strategy and I have illustrated this with pseudo-English: *no noise* comes out as *not some noise*. The I strategy of English is, of course, the word *some* and the latter is indeed a dedicated lexicalization. However, it is unlikely that all languages lexicalize an I quantifier. For the pronominal domain, Van Alsenoy (2014: 28) shows that 41,9% of the world's languages express 'somebody' or 'something' with a general noun meaning 'person' or 'thing', and that these often' just build regular noun phrases. These languages do not lexicalize pronominal I quantification, a good number of them will lack pronominal E quantification as well and maybe all of them will lack pronominal O quantification … yet I suspect that many will still have pronominal A quantification.

The general conclusion is this: the expectation due to Aristotle, Grice, Horn and Moeschler is that non-O values should lexicalize. We have seen that they often don't.

4. ENVOI

The facts illustrated are complicated enough to 'wrap' Jaques 'in a most humorous sadness', but not, of course, Ja-c-ques. And we should not be sad for English either. English does, in fact, have a *nall* word, and even a couple. My favorite *nall* refers to the bird of wisdom, with *nall* being a dialectal variant of *owl*.

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