

The Synchrony and Diachrony of a Scalar Coordinator: Latin *nēdum* ‘Let Alone’

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Abstract

This paper investigates the amphichronic semantics and pragmatics of the scalar coordinator *nēdum*, ‘let alone.’ Synchronically, *nēdum* must be preceded by an assertion that is stronger than all other alternative propositions in the focus domain. The distributional properties of the coordinator result directly from this semantics. Diachronically, the meaning ‘let alone’ developed from metalinguistic *nē* ‘not’ and the aspectual adverb *dum* ‘yet.’ *Nēdum* further developed from ‘let alone’ to ‘not just’ following affirmative left coordinands.

Keywords

Latin – pragmatics – semantics – negative-polarity item – downward entailment – scalar model – scalar focus – semantic change – grammaticalization – lexicalization

1 Introduction

The Latin coordinator *nēdum* is typically glossed ‘let alone, much less,’ etc.:

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- (1) *vix clamorem eorum, nedum impetum*, Suessetani tulere.
 ‘The Suessetani barely withstood **their war-cry**, let alone **(their) charge**.’

LIV. 34.20.7

The objects of the verb *clamorem eorum* ‘their war-cry’ and *impetum* ‘charge’ are ordered on a scale such as intensity of assault, i.e. $\langle \textit{impetus}, \textit{clamor} \rangle$, with the result that the first proposition entails the second. Following the terminology of Haspelmath (2007), I refer to the elements coordinated by *nēdum* as the left (or first) and right (or second) coordinands. When used in the sense ‘let alone,’ the *nēdum*-clause is always the second (i.e., right) coordinand. When used in the sense ‘not just,’ it is always the first (i.e., left) coordinand.

Nēdum poses a number of questions that have resisted satisfactory analysis (see e.g. Hand 1829–1845, Richardson 1886, Walden 1891, Netušil 1892, Löfstedt 1922, Brunner 1936, Pascucci 1961, Orlandini 2001). Synchronically, the main issue has been the licensing question: what must be present (semantically, pragmatically, or syntactically) in the first coordinand to license the use of *nēdum*? It has been observed repeatedly that the first coordinand is often negative. Indeed, in my corpus, this is the case about three-quarters of the time. As a result, attempts have been made to force the remaining quarter of examples into some sort of negative mould, but never with much success. Diachronically, there are two questions. The first is the source of the *nēdum*-construction. Here debate has focused on two possibilities: negative directives and purpose clauses (see Pascucci 1961 for a review). The second is how *nēdum* in the sense of ‘let alone’ further develops into a scalar additive ‘not just.’

In line with work by Krifka (1995), Toosarvandani (2010a), and Israel (2011), among others, I locate the distributional properties of *nēdum* in its lexical semantics: *nēdum* creates a scalar model (Fillmore et al. 1988, Israel 2011), in which the proposition of the left coordinand is semantically stronger than all other focus alternatives. This semantics captures the distribution of *nēdum* in both negative and non-negative contexts, as only certain constructions are emphatic enough to meet this requirement. I argue further that this semantics sets up the subsequent development in meaning from ‘let alone’ to ‘not just,’ which took place in affirmative left coordinands. As for the diachronic source of *nēdum*, this lies in the metalinguistic use (Horn 1985, 2001) of *nē* and the aspectual adverb *dum* ‘yet.’

The paper is structured as follows. In section 2, I present a basic description of the morphosyntax of the *nēdum*-construction. Section 3 introduces scalar models and discusses their rhetorical effects. Section 4 offers a semantics for *nēdum*, from which its distributional properties are then derived. The next two

sections then consider diachronic issues, namely the development of *nēdum* into a scalar additive ‘not just’ (section 5), and its origin in the aspectual adverb ‘not yet’ (section 6). Section 7 offers concluding remarks and sketches prospects for further research.

As this study grew out of my article on *nēdum* for the *Thesaurus linguae Latinae*, it is based on a diachronic corpus that begins with the earliest attested Latin texts and extends to about 600 CE (with a few exceptions). Within this period, I counted 188 tokens of *nēdum* (a search of the Latin Cross Database Searchtool will, however, turn up 228 tokens for the periods *antiquitas* and *aetas patrum*), the first of which is attested in Terence (195/185–159 BCE).¹ *Nēdum* continues to be used in the medieval period, but these data are excluded from consideration here. The word has not survived anywhere in Romance.

2 Preliminaries

2.1 Lexical Category

There is some confusion in the literature as to the lexical category of *nēdum*: descriptions vary between particle, conjunction, complementizer, and emphatic negation. By and large, the word behaves as a coordinator (as already claimed by e.g. *Lewis and Short*: s.v., Pascucci 1961:127). Haspelmath (2007:1) defines coordinating constructions as ‘syntactic constructions in which two or more units of the same type are combined into a larger unit and still have the same semantic relations with other surrounding elements.’ With sub-clausal coordinands (the first example of which is Cic. *Ad Fam.* 7.28.1), *nēdum* is to all appearances a coordinator of the same syntactic category as the conjunction *et*, with three exceptions: the coordinands are not reversible, coordination is always binomial (that is, at most two elements can be coordinated), and *nēdum* associates with focus (a property discussed in section 3).

1 For the possibility of *nēdum* in Plautus, see Pascucci (1961:131 n. 2). One option for scalar coordination in Plautus is *ne ... quidem* with *adeo*, e.g. *Asin.* 762–763:

- (1) **ne** epistula **quidem** ulla sit in aedibus
nec cerata **adeo** tabula.
 ‘Let there **not even** be a letter in the house,
let alone a wax tablet [‘nor so much as a wax tablet’].’

This construction parallels the use of *nēdum*, in that the first coordinand also contains a scalar-focus expression.

When *nēdum* coordinates clauses, the verb in the right coordinand occurs in the subjunctive (as already observed by e.g. Gildersleeve and Lodge 1895: §482.5):

- (2) attonitus repentino atque inopinato malo vix, quid obiceretur, intellegere **potui**, nedum satis **sciam**, quo modo me tuear.
 ‘Stunned by this sudden and unanticipated disaster, I **was** barely **able to** understand what they were charging me with, let alone **would** I really **know** how to defend myself.’

LIV. 40.15.14

There are two lines of thought concerning the motivation for the subjunctive. The first is that *nēdum* is a subordinating coordinator, and that the subjunctive reflects the embedded morphosyntactic status of its complement. Ernout and Meillet (1959: s.v.) object to this view, and argue that the subjunctive is semantically motivated: “mais, comme le mot exprime une impossibilité, il est souvent accompagné du subjonctif.” While I do not agree with their characterization of *nēdum* as expressing an impossibility, their point that the subjunctive is motivated by the meaning of the construction is well taken. In the end, these two views are not mutually exclusive. Morphosyntactically, the use of the subjunctive after *nēdum* reflects its status as a complement. But it also reflects the metalinguistic character of the construction: *nēdum* does not deny truth values like canonical negation, but rather pragmatic assertability. (This issue is discussed further in section 6.)

That *nēdum* can subcategorize for a subjunctive might give one the impression that it is actually a complementizer. If this were the case, we would not expect *nēdum* and *ut* to co-occur, but in fact they do:

- (3) ne voce quidem incommoda, **nedum ut** ulla vis fieret, paulatim permulcendo tractandoque mansuefecerant plebem.
 ‘Without even an offensive word, **let alone that** any violence occurred, (the tribunes) they made the plebs manageable by soothing and managing the plebs.’

LIV. 3.14.6

On the assumption that *ut* occupies C⁰, then *nēdum* should occupy a layer of syntax above this. Example (3) is remarkable for the fact that an ablative noun phrase and an *ut*-clause are being coordinated; while the phrasal categories differ, they are semantically aligned. Cf. Haspelmath (2007:19) for similar examples.

A second piece of evidence in favor of *nēdum* as a coordinator and not a complementizer is the fact that complementizers (such as e.g. *quin* or *quo minus*) usually select only clausal complements, whereas *nēdum* coordinates both clausal and sub-clausal constituents. (It may well have been the case that originally *nēdum* could only coordinate clauses. As the construction was extended over time to sub-clausal units, it would have become more coordinator-like.) Lastly, further evidence for the status of *nēdum* as a coordinator comes from the fact that it is in complementary distribution with conjunctions (e.g. **et nēdum*).

As with the English *let alone* construction (see Fillmore et al. 1988), it is possible to coordinate clauses with double focus ('F' marks focus constituents):

- (4) et consules bellicosos ... qui vel [in pace tranquilla]_{F1} [bellum excitare possent]_{F2}, **nēdum** [in bello]_{F1} [respirare civitatem forent passuri]_{F2}.
'and hawkish counsuls ... who even [in calm peace]_{F1} [were capable of stirring up war]_{F2}, **let alone** [in a time of war]_{F1} [would they let the state breathe]_{F2}.'

LIV. 26.26.11

There are ca. 33 tokens (18%) of the double-focus construction in my corpus. The rest of this paper will have nothing to say about this construction.

2.2 Status as Negation

Given that the base of *nēdum* is the negative operator *nē*, one expects it to behave as a negative operator. This expectation is by and large borne out, for instance by the numerous examples in which the left coordinand is negative:

- (5) satrapes si siet
amator, numquam sufferre eius sumptus queat,
nēdum tu possis.
'Even if a satrap were (her) lover, (he) would never be able to afford her expenses, **let alone** could you.'

TER. *Heaut.* 452–454

Whatever event is negated in the first coordinand is also negated in the second. Cases like this, however, are somewhat deceptive, because the negative semantics could simply trickle down, as it were, from the left coordinand to the right.

More telling evidence for the negation-like behavior of *nēdum* comes from two more properties: its meaning in the face of approximative adverbs and

neg-raising. *Nēdum* behaves as a negative even in the absence of negation in the left coordinand, as we see from example (1) above, repeated here:

- (6) *vix clamorem eorum, nedum impetum*, Suessetani tulere.
 ‘The Suessetani barely withstood **their war-cry**, let alone **(their) charge**.’

LIV. 34.20.7

While approximative adverbs like *vix* have a negative component to their meaning (in as much as they can be paraphrased ‘almost not’), they do not actually negate. In (6), the Suessetani presumably did withstand the *clamor* of their opponents: they did not, however, withstand their *impetus*. So here the second coordinand is negated, whether by *nēdum* itself or by somehow inheriting the negative component of *vix*.

Further negation-like behavior comes from neg-raising (on which see further Devine and Stephens 2013:351–358):

- (7) a. *Albam, unde ipsi oriundi erant, a fundamentis proruerunt, ne stirpis, ne memoria originum suarum exstaret. nedum eos Capuae parsuros credam*, cui infestiores quam Carthagini sunt.
 ‘Alba, from which they [= the Romans] themselves originated, they razed to the ground, in order that (their) stock, in order that the line, the memory of their origins, might not survive. **Let alone would I believe** that they would spare Capua, to which they are more hostile than Carthage.’

LIV. 26.13.16

- b. *ita nec indumenta nec sedem nec victum poterit habere, aliis quidquid habuerit diripientibus. nedum putemus* caelestis imperii maiestatem sine ira et metu posse consistere.

‘Thus he (= a king who does not have anger) will be able to have neither clothing, nor a dwelling nor food, as others will snatch whatever he has. **Let alone are we to suppose** that the majesty of heavenly might can exist without anger and fear.’

LACT. *De ira dei* 23.11

- c. *in comitatu tibi verus fui. nedum me peregre existimes* composita fabulari.

‘At court I was true to you. **Let alone think** that when I am away I make up stories.’

AUSON. *Epist.* 1.32.4

Although *nēdum* in (7a)-(7c) occurs in the matrix clause, it is semantically interpreted with the embedded clause. To take (7a) as illustrative, it is not that one barely believes, but rather one believes that the embedded proposition can barely be true. Thus it is not the matrix verb that is coordinated, but rather its embedded proposition. As is often the case with neg-raising in English (e.g. *I don't think he's coming* for 'I think he's not coming'), the matrix verbs in (7) are all epistemic.

In spite of these properties, there are also cases where *nēdum* does not negate:

- (8) Quinctius, quem armorum etiam pro patria satietas teneret, **nēdum** adversus patriam.
'Quinctius, who had had enough of war even on behalf of his country, **let alone** against his country.'

LIV. 7.40.3

Quinctius had had enough of war both on behalf of as well as against his country. This is a case where it does not seem possible to assign a negative reading to the right coordinand. I presume that this is just a reflex of the continued grammaticalization of *nēdum*: it developed the ability to be used more like a conjunction without any concomitant negative semantics.

2.3 Syntax

Nēdum follows a strict ordering profile of [Coordinand 1 (...) *nēdum* Coordinand 2]. Within the second coordinand nothing can occur to the left of *nēdum* (i.e. *nēdum* c-commands its scope without exception). The *nēdum*-phrase can adjoin internally or in post-clausal position. The former is more common:

- (9) a. *Clause-Internal Apposition*
regibus aequa, **nēdum infima**, insolita sunt.
'Kings aren't used to equality, **let alone to degredation.**'

TAC. *Ann.* 2.42.3

- b. *Post-Clausal Apposition*
nulla est profecto solida felicitas, quam contumelia ulla vitae rupit, **nēdum tanta**.
'Indeed, there is no secure fortune, which no (lit. 'any') hardship of life (can) destroy, **let alone (a hardship) so great.**'

PLIN. *Nat. Hist.* 7.146

It is possible for a clause to intervene between *nēdum* and its complement:

- (10) Cynthia non illas nomen habere sinat,
 nēdum, si leuibus fuerit collata figuris,
 inferior duro iudice turpis eat.
 ‘Cynthia wouldn’t allow them [= heroines of fabled beauty] (any?) glory,²
 let alone—if she were compared with light figures—
 would she come off inferior, (even) with a severe judge.’

PROP. 1.4.8–10

What exactly motivates these variations in the surface distribution of the *nēdum*-clause is unclear.

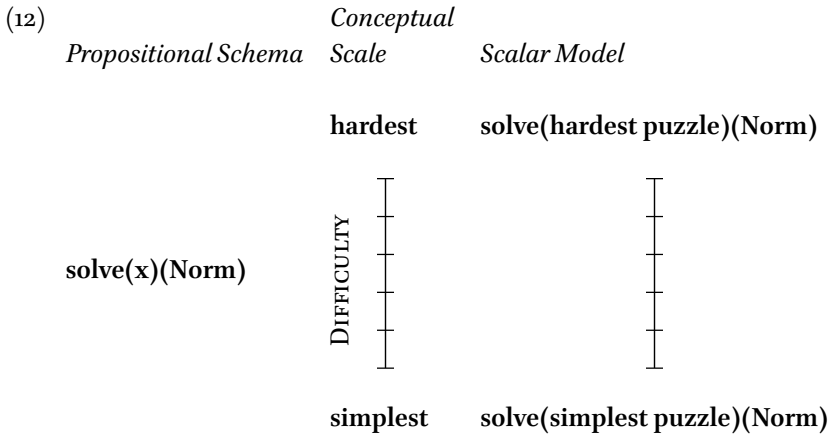
3 Scalar Models

Building on work by Horn (1972), Fauconnier (1975a) and (1975b) introduced the notion of the pragmatic scale (for an overview of scalar expressions in Latin, see Bertocchi and Maraldi 2012). This idea was then further developed by Fillmore et al. (1988) and Kay (1990) into that of a scalar model, which is a set of propositions ordered according to one or more conceptual scales (Israel 2011: 57). A propositional scale thus consists of a propositional schema (a proposition with an open variable) and a conceptual scale (see e.g. Israel 2011:48–78 for a fuller introduction). Let us begin with a simple example:

- (11) Norm can’t solve the simplest problem, let alone the hardest.

The propositional schema and conceptual scale yield the following scalar model:

² See Sullivan (1976:96) for the meaning of the idiom.



A conceptual scale is a partially ordered set of conceptual entities (Hirschberg 1985). In (12) we have various values along a dimension of difficulty. In affirmative contexts, the model licenses inferences from high propositions to low propositions: if Norm can solve the hardest problem, that (pragmatically) entails that he can solve all easier problems. In negative contexts, however, the inferences are reversed: they go instead from low values to high values. If Norm cannot solve the simplest puzzle, then presumably he cannot solve anything higher (i.e., more difficult) on the scale.

As noted above in section 2.1, *nēdum* associates with focus (cf. Toosarvandani 2009). Following Roberts ([1996] 2012) (although the basic idea goes back at least as far as Kvíčala 1870), focus is the information that fills in the variable of an underlying question of the discourse (which is known in Roberts' framework as the Question under Discussion, or QUD):

- (13) A: Who washed the dishes?
 B: [John]_F washed the dishes.

A's question seeks a particular piece of information, namely the person who washed the dishes. The portion of B's answer that corresponds to the interrogative pronoun of A's question is the focus, namely *John*. Focus is thus the information that fills in a variable in a function such as *x washed the dishes*. To connect this to our scalar model in (12), the values that can be applied to the propositional schema are focus values. The entire set of possible focus values I refer to as the focus domain (Rooth 1985, 1992, Büring 2012).

The following Latin example illustrates the scalar model created with *nēdum*:

- (14) ... pueri **sobrios** quoque **convictus**, nedum **temulentos** ignorantis.
 ‘... of a boy unfamiliar with even **sober banquets**, let alone **drunken (ones)**.’

TAC. *Ann.* 13.15.10

The noun phrases *sobrios convictus* and *temulentos (convictus)* are ordered on a scale of debauchery, such that lack of familiarity with the former pragmatically entails lack of familiarity with the latter via the conceptual scale *sobrius* <_s *temulentus*.³ This relationship of pragmatic entailment is grounded in world knowledge, and not pure logic. For it would be possible for a young boy to have experience only with debauched parties and none with more sober affairs—as would presumably be the case if he were raised by heavy drinkers, for instance. But on the basis of world knowledge, one can maintain that if a boy has no experience of tame parties, then he presumably has no experience with anything decadent.

Nēdum is also used with coordinands that stand in a relation of logical entailment:

- (15) Christianus **nullius** est hostis, nedum **imperatoris**.
 ‘The Christian is an enemy of **none**, let alone of **the emperor**.’

TERT. *Ad Scapulam* 2.6

If a Christian is an enemy of no one, then he is not an enemy of the emperor. Examples like these raise the question of why a speaker would go to the trouble of uttering the second coordinand at all, when its propositional content is entirely contained in the first. I answer this question in the next section.

3.1 *The Rhetorical Effects of a Scalar Model*

Consider the following example, in which Chremes tells Menedemus that he cannot afford a particular woman for his son:

3 The claim that *nēdum* orders two elements on a scale is not entirely new: it is for instance suggested by Walden (1891:108, 127) and Orlandini (2001:228–232). Devine and Stephens (2013:365) assume such an analysis on the basis of one example. My own account owes far more, however, to the work of Fillmore et al. (1988) and Toosarvandani (2008), (2009), (2010a), and (2010b) on *let alone*.

- (16) satrapes si siet
 amator, numquam sufferre eius sumptus queat,
nedom tu possis.

‘Even if a satrap were (her) lover, (he) would never be able to afford her expenses, **let alone** could you.’

TER. *Heaut.* 452–454

The assertion that a paragon of wealth such as a satrap could not afford the girl in question licenses a universal implicature: if he cannot afford her, no one can. This proposition is thus stronger than any alternative proposition in the focus domain. The at-issue content of the utterance (i.e., what is being asserted) is not “you couldn’t afford that girl,” as this is derived from the scalar model (a point elaborated in section 4.2). Because the right coordinand is an entailment of the assertion, a conversational implicature emerges to the effect that it is not worthy of assertion (via the Maxim of Quantity, as the proposition is uninformative).

If the left coordinand always represents the strongest focus value from which all weaker values can be inferred, the question arises of why the right coordinand is uttered at all. Consider again (15), which is repeated here for convenience:

- (17) Christianus **nullius** est hostis, **nedom** **imperatoris**.
 ‘The Christian is an enemy of **none**, let alone of **the emperor**.’

TERT. *Ad Scapulam* 2.6

As observed in the previous section, if Christians are the enemy of none, that entails that they are not an enemy of the emperor. On this view, the right coordinand is superfluous. But in fact, the right coordinand is crucial. Tertullian’s point is not to assert that Christians are not hostile to the emperor: (17) cannot in fact serve that function because the right coordinand is not part of the at-issue meaning. Tertullian is instead using the entailment of the *nedom*-clause to show that the proposition of the right coordinand—that is, that the Christian is not an enemy of the emperor—is in fact uninformative and via Gricean maxims therefore not worthy of assertion. This cannot be accomplished under ellipsis.

3.2 *Nedom Across Text-Type*

As the *nedom*-construction contests a proposition in the Common Ground, it will only be used in argumentative contexts (on which see generally Ducrot 1974, Anscombe and Ducrot 1976, Ducrot 1980, 1991; for scalarity and argumen-

tation in Latin, see Bertocchi et al. 1998); Israel (2011:8) refers to polarity items in general as “argumentative operators.” We see this not just in individual utterances (such as those from the previous section), but also across text-types:⁴

TABLE 1 *Dispersal rates for nēdum*

Rank	Text	Total word count	Tokens	Per 1,000	Dispersal rate
1	Livy, <i>Ab urbe condita</i>	504,341	22	0.04	0.795
2	Tertullian, <i>Adversus Marcionem</i>	84,009	19	0.23	0.760
3	Tertullian, <i>De anima</i>	24,377	8	0.33	0.714
4	Tacitus, <i>Annales</i>	89,676	10	0.11	0.687
5	Seneca Minor, <i>Epistulae</i>	121,039	8	0.07	0.596
6	Seneca Minor, <i>Dialogi</i>	41,247	5	0.12	0.550
7	Tacitus, <i>Historiae</i>	51,800	3	0.06	0.478
8	Suetonius, <i>De vitis Caesarum</i>	70,992	3	0.04	0.478
9	Ammianus, <i>Res gestae</i>	124,478	3	0.02	0.478
10	Tertullian, <i>Adversus Hermogenem</i>	11,334	3	0.26	0.478

Dispersal rate measures not simply raw frequency, but rather consistency of use. Take for instance Livy, whose usage rate is actually much lower than that of Tertullian in the next two spots: .04 in comparison to .23 and .33, respectively. (Indeed, on a tally of raw frequency across authors, Tertullian comes out on top with 53 tokens out of 328,563, or .0002, while Livy holds the second spot with 23 tokens out of 514,371, or .00004.) Livy’s use of *nēdum*, however, is more evenly distributed throughout the *Ab urbe condita* than in any other text; it is worth noting that Livy is also the first author in which we find *nēdum* after positive left coordinands. Dispersal rate thus offers a more nuanced portrait of usage relative to particular texts than raw frequency.

It is this measure of consistency that enables us to see which text-types the *nēdum*-construction is most at home in. The robust presence of Tertullian in Table 1 is in and of itself telling (three of his texts occur in the top ten spots), as he was a highly polemical Christian apologist. This suggests that the *nēdum*-construction is most at home in discourse that involves fine-grained

4 The corpus used for these data is not the same as the corpus used in the rest of this study. It is based instead on a corpus of about six million words. The dispersal rates were generated with the program WordSmith.

assessment of propositions. This would include not only religious tracts such as those of Tertullian, but also historiography (which is represented by five works in the above table: spots 1, 4, 7, 8, and 9), and Seneca (represented by spots 5 and 6). Pascucci (1961:132) and Fedeli (1980) both characterize the *nēdum*-construction as colloquial, but nothing in the table above supports this view.

The table above is interesting also for what it does not contain, namely Cicero and poetry. Ciceronian discourse certainly does not want for argumentation or rhetorical flair. One wonders, then, what features specifically tempered his use of the *nēdum*-construction (was it simply a question of time, i.e. he used other scalar coordinators?). As for poetic contexts, *nēdum* occurs only a handful of times. That poets do not make use of the *nēdum* construction, however, is exactly what this analysis would predict: it is a genre given to narration, dialogue, and description, and not one (generally speaking) used for the evaluation of propositions.

4 The Licensing Question

While it has long been clear that *nēdum* can only be used in certain contexts, the exact nature of those contexts has been a matter of dispute. As roughly three-quarters of the time the first coordinand contains either clausal or affixal negation, there was a tendency in the past to simply equate the licensing context with negation. So e.g. Walden (1891:127): *nēdum* “was used only in sentences in which the central idea was negative.” In a similar vein, both the *OLD* and *Lewis and Short* divide the entry for *nēdum* according to the polarity of the first coordinand. While perhaps a useful way to present the data, both dictionaries go so far as to offer different paraphrases for *nēdum* according to whether it occurs in an affirmative or negative environment. This is somewhat misleading. While *nēdum*-clauses with an affirmative first coordinand do exhibit properties that those preceded by a negative expression do not (as observed in section 5), it is not the case that they have different senses. In short, there is no reason to segregate or otherwise try to explain away cases with a positive first coordinand, as polarity is simply not the feature that licenses the use of *nēdum*.

4.1 Downward Entailment

Before turning to the semantics and distributional properties of *nēdum*, it is worth considering an approach that has found no small amount of favor in the literature. Consider first the distribution of *any*. When preceded by a negative

expression, *any* is grammatical; in a positive-polarity environment, however, it is not:

- (18) a. I have **not** seen any horses.
 b. *I have seen any horses.

While such observations are presumably responsible for the term negative-polarity item (or NPI), research into this class of words has shown that they are not in fact restricted to negative environments. Consider for instance the following set of sentences (from Kadmon and Landman 1993:353):

- (19) a. At most three girls saw anything.
 b. *At least three girls saw anything.
 c. Every girl who saw anything was happy.
 d. *Some girl who saw anything was happy.

The use of *anything* is licensed in the presence of the quantifier phrases *at most three girls* and *every girl*, but not *at least three girls* and *some girl*. An immense amount of research has been devoted to understanding the semantic properties that lie behind these (and other) distributional patterns. Building on work by Klima (1964) and Fauconnier (1975a) and (1975b), Ladusaw (1980a), and (1980b) ushered in a new era in the study of NPIs, as he offered a generalization that covered most of these environments: he argued that NPIs are licensed in downward-entailing environments.

Downward-entailing operators license inferences from sets to subsets,⁵ as in the following pair of examples:

- (20) *Downward Entailment*
 a. Nobody ran.
 b. Nobody ran fast.

The semantically weaker predicate (*ran*) entails the semantically stronger (*ran fast*). Downward entailment stands in contrast to upward entailment operators, where inferences proceed in the other direction:

⁵ Formally, a function is monotone decreasing iff for arbitrary elements X and Y : $X \subseteq Y \rightarrow f(Y) \subseteq f(X)$.

- (21) *Upward Entailment*
 a. John ran fast.
 b. John ran.

The semantically stronger sentence now entails the semantically weaker, and the inference proceeds from subset to set. Downward-entailing operators thus reverse the direction of entailment among predicates. There is widespread agreement that downward entailment is a crucial property in licensing NPIs in English.

The situation is similar in Latin. NPIs in Latin include quantifiers such as *quisquam* ‘anyone,’ *ullus* ‘any,’ and *umquam* ‘ever’ (see further Devine and Stephens 2013:362–387), complementizers such as *quin* and *quominus* (Horn 1978), as well as minimizers such as *ne guttulam quidem*, *hilum*, *ciccum*, *non nauci* (see further Pott 1859–1876: vol. 1: 411). For an exposition of downward entailment on the basis of Latin data, see Devine and Stephens (2013:361–368); for quantification generally in Latin, see Bertocchi et al. (2010) and Fruyt and Spevak (2010).

Downward entailment plays a crucial role in the distribution of English *let alone*, and the same is no less true for *nēdum*. While I accept the truth of this insight, I do not pursue this line of argument below because downward entailment cannot account for all the distributional properties of *nēdum*. Questions, conditionals, and approximate adverbs (e.g. *barely*) are not straightforwardly downward-entailing environments (for an overview of attempts to extend the concept, see Rothschild 2006), and yet *nēdum* is licensed in all three. Conversely, the adverbs *few* and *seldom* are downward-entailing, and yet *nēdum* is never attested after either.⁶

4.2 *The Semantics of nēdum*

In line with the intuition of Fillmore et al. (1988) that the left coordinand is more informative than the right in a *let alone*-construction, Toosarvandani (2010b) proposes the following semantics for *let alone*:

- (22) Oswald hasn't climbed the Berkeley Hills, let alone Mt. Everest.↗
 a. *At-issue entailment*: $\neg \text{climb}(\text{the-berkeley-hills})(\text{oswald})$
 b. *Background Entailment*: $\text{the-berkeley-hills} <_s \text{mt-everest}$
 c. *Contextual Entailment*: $\neg \text{climb}(\text{mt-everest})(\text{oswald})$

6 A boolean approach along the lines of Zwarts (1998) faces similar challenges, as *nēdum* occurs in downward-entailing, anti-additive, and antimorphic environments.

The at-issue entailment refers to what is asserted (see further e.g. Simons et al. 2010) and here stands in contrast to the content in (22b) and (22c), which are not part of the asserted content of the sentence, but rather have a background quality. (22b) requires that the Berkeley hills be ordered lower on some contextually-salient scale than Mt. Everest. Combining the assertion in the left coordinand with this scalar component yields (22c), which is accordingly labelled a *contextual entailment*.

The semantics for *nēdum* is similar, but do involve one crucial difference:⁷ In contrast to (22b) above, it is not simply the case that the left coordinand has to be semantically stronger than, i.e. entail, the right. Rather, the left coordinand has to be stronger than all other relevant focus alternatives (cf. the notion of emphatic assertion in Krifka 1995). So the left coordinand is not simply stronger than the right, but creates a scalar boundary (a maximum or minimum, depending on the model). This requirement plays a crucial role in the distributional behavior of *nēdum*, as only certain constructions meet this threshold of strength.⁸

4.3 The Distribution of *nēdum*

The above semantics of *nēdum* readily accounts for the following licensing and anti-licensing contexts:

(23) Licensing Contexts

a. Negated Existential Quantification

nullus 'none'; *numquam* 'never'; *ullus* 'any'; *quisquam* 'anyone'; *quilibet* 'any.'

b. Scalar Focus Quantifiers

ne ... quidem 'not even'; *etiam* 'even'; *nec* 'not even'; *vel* 'or, even'; *quoque* 'also, even'; *et* 'and, even'; *ipse* 'self, very, even'; *saltem* 'even, so much as.'

7 The contrast with English *let alone* is meant only to highlight the Latin semantics. It may well be the case that the semantics of English *let alone* are actually closer to that of Latin *nēdum* than (22) suggests. For instance, the left coordinand of the English construction might be subject to the same scalar-boundary requirement as in Latin. What in Latin is marked lexically (with e.g. a scalar-focus particle) might be marked in English via intonation. (I am grateful to Daniel Büring for discussion of this point.) If this proves to be the case, it would not be all that surprising, as a similar distinction can be found in focus-marking generally between the two languages (i.e., intonation in English, surface word order in Latin).

8 It should be borne in mind that my study is based on a corpus of written language. It may well have been the case that in the spoken language, the status of the left conjunct as a scalar boundary may not have been so consistently encoded lexically. See further section 4.4.

c. **Approximative Adverbs**

vix 'barely'; *vixdum* 'id.'; *aegre* 'id.'

(24) *Anti-Licensing Contexts*

a. *pauci* 'few.'

b. *raro* 'rarely, seldom.'

As (23a)-(23c) indicate, *nēdum* is licensed after negated existential quantification, scalar focus quantifiers, and approximative adverbs. Each of these three classes positions a proposition at a scalar boundary. In the case of negated existential quantifiers, the left conjunct is a logical minimum that entails the negation of all higher values on a scale. Scalar-focus constructions for their part assert an extreme value that endows its proposition with a similar entailment strength, although in this case the entailment is pragmatic and not strictly logical. Approximative adverbs perform a similar function in that they encode reference to a boundary that was not reached.

The following examples illustrate the first class of negated existential quantification:⁹

- (25) a. **non** voco autem sapientem, supra quem **quicquam** est, **nedum** voluptas.

'I am not referring by the way to a *sapiens*, above whom **nothing** stands, **let alone** pleasure.'

SEN. *Dial.* 7.11.1

- b. **nulla** est profecto solida felicitas, quam contumelia **ulla** vitae rupit, **nedum** tanta.

'There is indeed no impermeable fortune, which **no** injury of life ruptures, **let alone** one so great.'

PLIN. *Nat. Hist.* 7.146

To take (25a) as illustrative, if nothing has control over a *sapiens*, that will exclude all other focus alternatives in the propositional schema **has-control-over(sapiens)(x)**, including that of pleasure, whose exclusion is

9 These examples are remarkable for at least two reasons. The first is that they do not correspond to English distributional patterns. *Nothing* in (25a) is represented in Latin by *quicquam* 'anything,' which would be ungrammatical in English. Likewise in (25b), *no injury* is *contumelia ulla*, 'injury any.'

relevant here. *Nēdum* is also licensed after “rhetorical” questions (see further Devine and Stephens 2013:386–387):

(26) *Rhetorical Questions*

- a. **quid** autem tuto cuiquam, **nēdum** summam rem publicam, permitti, si ratio non sit reddenda?

‘What then—let alone the height of the republic—could be safely entrusted to anyone, if no account was to be given?’

LIV. 38.50.9

- b. gladium vero latrociniis ebrium, **quis** non a domo tota, **nēdum** a cubiculo, **nēdum** a capitis sui officio relegabit?

‘And as for the sword that is drunken with murders, who will not expel it from his **whole** house, **let alone** his bedroom or pillow-head?’

TERT. *De Resurrectione Carnis* 16.7

The interrogative pronoun here functions as negated existential quantifiers, i.e. *quis* in (26b) means ‘no one.’

The advantage of this account is that we need no special pleading when *nēdum* occurs in positive-polarity environments:

- (27) posuit turpe esse **cui-libet Romano**, **nēdum Ciceroni**, vitam rogare.

‘He said that it is base to ask for **any Roman’s** life, let alone **Cicero’s**.’

SEN. *Suas.* 6.8

That it is base to ask for any Roman’s life, no matter how insignificant, entails that it is base to ask for the life of so great a personage as Cicero.

In the second strategy, speakers use scalar-focus markers to create an extreme scalar value (on which generally see e.g. Karttunen and Karttunen 1977, Kay 1990, Giannakidou 2007, Traugott 2009, Gast and van der Auwera 2011, Gast 2012). The following examples illustrate this use in a negative-polarity environment:

(28) *Scalar-Focus in a Negative-Polarity Environment*

- a. egentem hominem et qui **ne se quidem** alere, **nēdum** alios, posset.

‘A needy man and who could **not even** look after himself, **let alone** others.’

SEN. *Contr.* 10.4.15

- b. ... pueri sobrios **quoque** convictus, **nedum** temulentos ignorantis.
 ‘... of a boy unfamiliar with **even** sober banquets, **let alone** drunken (ones).’

TAC. *Ann.* 13.15.10

- c. **et** iustitia tua displicet iniquis, **nedum** vipera et vermiculus.
 ‘**Even** your righteousness displeases the wicked, **let alone** the viper and the worm.’

AUG. *Conf.* 7.16.22

Again, the occurrence of *nēdum* after affirmative propositions is a straightforward prediction of the semantics:

(29) *Scalar-Focus in a Positive-Polarity Environment*

- a. Quinctius, quem armorum **etiam** pro patria satietas teneret, **nedum** adversus patriam.
 ‘Quinctius, who had had enough of war **even** on behalf of his country, **let alone** against his country.’

LIV. 7.40.3

- b. ... quae **vel** socios, **nedum** hostes victos, terrere possent.
 ‘... which (displays of power) would be able to terrify **even** allies, **let alone** conquered enemies.’

LIV. 45.29.2

- c. ab **ipso** incolatu Babylonis illius in Apocalypsi Iohannis submovemur, **nedum** a suggestu.
 ‘From **even** [lit. ‘itself’] residence in that Babylon in the Revelation of John we are called away, **let alone** its pomp.’

TERT. *De Corona Militis* 13.3

To take (29a) as illustrative: to be tired of fighting on behalf of one’s country entails that one would be tired of fighting against it. The former is an obligation of men that they should take pride in, while the latter is a given.

In as much as approximative adverbs mean ‘x and no more’ (cf. Horn 2002), the focus of the left coordinand is an endpoint on a scale:

(30) *Approximative Adverbs*

- a. **aegre** inermem tantam multitudinem, **nedum** armatam, sustineri posse.

‘So great a mob could **barely** be contained when unarmed, **let alone** armed.’

LIV. 6.7.2

- b. puerum **vixdum** libertatem, **nedum** dominationem modice laturum.
‘A boy would **scarcely** bear liberty with moderation, **let alone** domination.’

LIV. 24.4.1

- c. **haud** equidem contra tot signa Camillo
detulerim fasces, **nedum** (pro sexus!) inerti
mancipio.

‘In the face of such portents I would **hardly** have entrusted Camillus with the fasces, **let alone** a sexless slave (the shame of it!).’

CLAUD. *In Eutropium* 19.55

In (30a) *aegre* asserts that containing an unarmed mob is the most that could be achieved, so that any stronger alternative (such as an armed mob) is ruled out.

Finally, this account also predicts the anti-licensing contexts, that is, environments in which *nēdum* cannot be used. These include the quantifiers *pauci* ‘few’ and *raro* ‘rarely, seldom.’ Both are downward-entailing (see Devine and Stephens 2013:227–228) and can in fact license English *let alone*:

- (31) a. In Southall now, particularly since the murder in summer 1976 of a young man, Gurdeep Singh Chaggar, by racist thugs, **few** Asian adults even think about integration, **let alone** want it.

TOOSARVANDANI (2008:731)

- b. We have constructed an intellectual world in which educational institutions **rarely** let us ask, **let alone** answer, the most serious questions of our deeper human nature.

ALAIN DE BOTTON, “Education is what makes us fully human,” *New Statesman* 18 July 2013

These quantifiers do not, however, represent scalar endpoints, whether in context or generally, i.e. $\langle all, many, some, few, none \rangle$, $\langle always, often, sometimes, rarely, never \rangle$. *Pauci* and *raro* are accordingly too weak for *nēdum*. While these gaps could of course simply be due to the accidental nature of the textual record, they are precisely what my account would predict.

4.4 *Emphatic Negation?*

The above account predicts that normal negation (whether *non* or affixal negation) should not license *nēdum*. While such examples are rare, they do occur:

- (32) a. Cynthia **non** illas nomen habere sinat
 nedum, si leuibus fuerit collata figuris,
 inferior duro iudice turpis eat.
 ‘Cynthia wouldn’t allow them [= heroines of fabled beauty] (any?)
 glory,
 let alone—if she were compared with light figures—
 would she come off inferior, (even) with a severe judge.’
 PROP. 1.4.8–10
- b. **non** discessere ab armis in Pharsalia ac Philippis civium legiones,
 nedum Othonis ac Vitelli exercitus sponte posituri bellum fuerint.
 ‘The citizen-legions did **not** (even?) lay down their weapons at Pharsalia and Philippi, **let alone** were the armies of Otho and Vitellius going to give up the war on their own accord.’
 TAC. *Hist.* 2.38.2
- c. deus si esset, latere se **non** posset, **nedum** aliqua eius sacramenta.
 ‘(Even?) if he were god, he could **not** conceal himself, **let alone** any of his mysteries.’
 TERT. *adv. Marc.* 5.6.2
- d. mortalia facta peribunt,
 nedum sermonum honos stet et gratia vivax.
 ‘(Even?) mortal deeds will fade, **let alone** that the honor and elegance of language survive.’
 HOR. *Ars Poetica* 69
- e. regibus aequa, **nedum** infima, insolita sunt.
 ‘Kings are **unaccustomed** (even?) to equal treatment, **let alone** degradation.’
 TAC. *Ann.* 2.42.3

The question is whether the negation in these examples encodes emphasis in the same way as our three licensing contexts above. There is some reason to think that this is in fact the case, as indicated by the translations. For instance, it

seems that the phrase *non nomen habere sinere* in (32a) is a minimizing expression used to laud Cynthia by denying the other women even the smallest quantity of *nomen*. For (32c), it is possible that the preposing of *deus* before *si* marks a scalar concessive conditional (i.e. ‘even if’ see Haspelmath and König 1998), a feature that we also find in (5) above. The scalarity of the conditional would then carry over to the left coordinand. It is perhaps not an accident that two of these examples come from poetic contexts, and that this use of *non* with *nēdum* is a deliberate exploitation of the norms of the construction (in the sense of Hanks 2013).

5 *Nēdum* as scalar additive ‘not just’

Despite its scant recognition in dictionaries, *nēdum* in fact has a second sense, ‘not just’ (it is acknowledged by *Lewis and Short*, but not the *OLD*).¹⁰ Its textual presence is, to be sure, minimal. The only guaranteed example of the construction in the classical period is in the following letter to Cicero (Cic. *Att.* 10.16.6 is in my view to be included here, as well, but it is textually problematic):

- (33) **nēdum hominum humilium** (ut nos sumus), **sed etiam amplissimorum virorum** consilia ex eventu, non ex voluntate a plerisque probari solent.
 ‘The advice of **not just humble people**, as we are, **but even of the greatest men**, tends to be judged by most people by the result, not by the intention.’

CIC. *Att.* 9.7a.1

Nēdum in the sense of ‘not just’ is not attested again until much later, with Pseudo-Ambrose (4th c. CE?):

- (34) ut dominium acquirat **nēdum** inferiorum suarum virtutum, **sed et totius mundi**.
 ‘... that it acquires control of not just of its own inferior virtues, but even of the whole world.’

PS.-AMBR. *De XLII mansionibus filiorum Israel* 19 p. 28A Migne

¹⁰ In fact, the word has a third basic sense of ‘nonetheless,’ but this is attested late and only a few times (at least in my corpus), and is therefore not considered here.

Löfstedt (1959:64) argues that despite the gap in attestation the construction was actually in use between Cicero and Pseudo-Ambrose: it was simply confined to the spoken language. This is a difficult claim to accept, as there are plenty of “colloquial” texts in the span between these two authors, so it is not as though this register has no representation during this time (cf. also Hellmuth 1888).

The ‘let alone’ and ‘not just’ constructions share the following properties (cf. the remarks of Devine and Stephens 2006:262–265 on *non solum* and *non modo*). First and foremost, both are interpreted within a scalar model. In example (33), *amplissimorum virorum* and *hominum humilium* are ordered along a scale such as ‘status.’ Second, both coordinands are focus alternatives, as is the case when *nēdum* is used in the sense ‘let alone.’ Third, *sed etiam* functions not simply to add a value to the focus domain, but rather one that is semantically stronger than all other alternatives.

Given this semantic overlap, I would locate the difference between ‘let alone’ and ‘not just’ in the pragmatic sphere, in particular the discourse status of the left coordinand. When *nēdum* is used in the sense ‘let alone,’ the left coordinand is already in the Common Ground. By contrast, when it is used in the ‘not just’ sense, it is new to the Common Ground. As a result, the speaker has to utter the *nēdum*-clause first, in order to set up the scalar model. The position of *nēdum* in the first coordinand thus reflects the divergent pragmatics of the construction. Pace Shackleton Bailey (1968: ad loc.), its position is thus not simply a matter of “inversion” per se, but rather is motivated by discourse context.

This pragmatic extension of the semantics developed in a specific context,¹¹ namely positive-polarity clauses in which the first coordinand contains a scalar-focus operator (e.g. ‘even’):

- (35) ... quae **vel** socios, **nēdum** hostes victos, terrere possent.
 ‘... which (displays of power) would be able to terrify **even** allies, **let alone** conquered enemies.’

LIV. 45.29.2

11 I assume that ‘let alone’ is the primary meaning for two reasons. The first is the textual record: the former construction is attested both first and overwhelmingly in comparison to the latter. Of course the use of *nēdum* in the sense of ‘not just’ could have been an archaism that gradually gave way to ‘let alone.’ But the fact that the sense ‘not just’ appears to develop from positive-polarity examples of ‘let alone’ (as argued below) suggests that this was not the case. Second, the ‘not just’-construction is the more grammaticalized of the two: it only coordinates sub-clausal elements and the negative semantics of the *nē* are now completely gone.

In this context, the *nēdum*-clause admits a ‘not just’-paraphrase:

- (36) ‘The displays of power would be able to terrify not just conquered enemies, but even allies.’

The following examples, which again contain the same two crucial features, also allow a ‘not just’-reading in addition to the ‘let alone’-paraphrase:

- (37) a. plerosque auctores **etiam** deos existimavit antiquitas, **nēdum** divos.
‘Antiquity considered most authors **not just** divine, (but) **even** gods.’

TERT. *De anima* 2.3

- b. **etiam** domorum, **nēdum** urbium, interna noscentes.

‘Knowing the insides of **not just** the cities, (but) **even** the houses.’

AMM. 31.16.1

By contrast, in negative contexts, this paraphrase is not available:

- (38) Christianus **nullius** est hostis, **nēdum** imperatoris.

#‘The Christian is an enemy not just of the emperor, (but) **of none**.’

TERT. *Ad Scapulam* 2.6

That the ‘not just’-paraphrase is infelicitous here is entirely expected, as the construction is used to *add* a value to the focus domain, whereas in negative contexts elements are being excluded from the focus domain.

While this analysis can account for the development of the sense ‘not just’ on its own, a second factor may have contributed to the actuation of the change, namely analogy with *non modo* (for the semantics of which see Devine and Stephens 2006:262–265), which also exhibits a ‘let alone’ and a ‘not just’ use (for analogy in semantic change, see Kroesch 1926 and Klein 1997:35–36, as well as Blank 1999:79 on *pedes* and *eques*):

- (39) *Let alone’-reading*

ne sues **quidem** id velint, **non modo** ipse.

‘Not even pigs would want this, let alone (would I) myself.’

CIC. *Tusc.* 1.92

- (40) *Not just’-reading*

... omnia **non modo** dicere, **verum etiam** libenter audacter libereque dicere.

‘... **not just** to say everything, **but also** to say it willingly, boldly, and freely.’

CIC. *S. Rosc.* 31

The relationship between *nēdum* and *modo* is close, as it leads to a contamination in the fourth century: both Hilarius of Poitiers (c. 300–c. 368 CE) and Sulpicius Severus (c. 363–c. 425 CE) use *nēdum modo* as a scalar coordinator.

6 Origins

While the origin of *nēdum* is generally agreed to lie in a fusion of the negative operator *nē* and *dum*,¹² debate surrounds the source function of the two morphemes:¹³

- (41) a. Purpose clauses: Walden (1891:108); Pascucci (1961:128) lists further proponents (*OLD*: s.v. 13 seems to be in agreement)
- b. Prohibitive clauses: Pascucci (1961)
- c. Modal clauses with potential semantics: Brunner (1936:19)
- d. *Nēdum* develops from an original sense of *nonne*: Netušil (1892:580).

Pascucci (1961) frames the debate as coming down to (41a) or (41b). As these are the two most prominent analyses in the literature, I focus on them in the next two sections. Despite their prominence, they both fail to capture crucial aspects of the development of *nēdum*, in as much as they focus on the source of *nē* to the neglect of *-dum*.

6.1 Previous Analyses

6.1.1 Purpose Clauses

Walden (1891:108) locates the source construction of *nēdum* in purpose clauses, and offers the following stages of development (on the basis of Ter. *Heaut.* 452–454, example (5) above):

- (42) i. Ne (dum) tu te posse credas, dico neque satrapam posse.
 ‘In order that you not think that you can (afford that girl), I am saying that not even a satrap could (afford that girl).’

12 See Hand (1829–1845:150–154); Richardson (1886:15); Delbrück 1893–1900:527; Pascucci (1961:127), with further references. Thurneysen (1884) and Kroll (1932:108) begin from other forms.

13 Leumann et al. (1972: § 331), following Brunner, start from an original meaning ‘auch niemals,’ ‘auch nicht jemals.’ Why they start here is not clear to me.

- ii. Ne (dum) tu te posse credas, neque satrapa potest.
'In order that you not think that you can (afford that girl), not even a satrap could.'
- iii. Ne (dum) tu possis, satrapa non potest.
'Not that' you could, a satrap can't.'
- iv. Satrapa non potest, ne (dum) tu possis.
'A satrap can't, let alone could you.'

Walden begins in (42i) with the purpose-clause construction, 'In order that you not think that you can, I am saying that not even a satrap could.' Via successive stages of reduction we end up with (42iv), 'A satrap can't, let alone could you.' There are at least three problems with this sketch, however. The first is that it is not clear what status these examples are supposed to have. Walden acknowledges that they need not have been empirically attested stages of development. But what are they then—steps in the mind? In short, it is not quite clear what we're even looking at in (42). Second, Walden offers no motivation, be it semantic or morphosyntactic, for the progression from one stage to the next. Finally, the sketch relies on the unwarranted assumption that *nēdum* is essentially an optional variant of *nē* (hence the parentheses around *dum*) in its role as a scalar coordinator. While *nē* can be used in this function (see below), there is no reason to believe that these constructions are complements of one another. It is noteworthy, however, that Walden locates the source of *nēdum* in a metalinguistic construction, i.e. (42i), where the purpose clause does not modify the proposition in the matrix clause, but rather the speech act.

6.1.2 Prohibitives

Pascucci (1961) argues for a different source construction for *nēdum*, namely prohibitive clauses:

- (43) a. vix incedo inanis, **ne** ire posse cum onere **existumes**.
'It's all I can do to stump along empty handed, so **don't think** I can travel with a load.'

PLAUT. *Amph.* 330

- b. Milphidippa ut tremit atque extimuit, postquam te aspexit.
Pyrgopolinices viri quoque armati idem istuc faciunt, **ne tu mirere mulierem**.
Milphidippa: 'See how terrified she is since she beheld you.'
Pyrgopolinices: 'Even armed men do the same thing; **don't wonder at a woman being so.**'

PLAUT. *Mil.* 1271–1274

Via a bleaching process in which the imperative contributes increasingly little to the communicated content of the utterance, it is eventually omitted, as a result of which we are left with bare *nē*. Pascucci contends that even after *nēdum* replaces the old directive *nē*, traces of the earlier construction can nevertheless be felt. He paraphrases the first attested use of *nēdum* as follows (I include here my translation as well):

- (44) satrapes si siet
 amator, numquam sufferre eius sumptus queat,
nēdum tu possis.
 ‘Even if a satrap were (her) lover, (he) would never be able to afford her expenses, **let alone** could you.’
 ‘[U]n satrapo ... non arriverebbe a soddisfare le esigenze di quella donna e tu che sei molto da meno di un satrapo, **non crederti** (cioè: a più forte ragione non ritenerti, o: tanto meno considerati) tu capace di questo!’

TER. *Heaut.* 452–454

There are two significant problems with this analysis. First, there is weak empirical support for the development of the *nēdum* construction from a *nē*+imperative construction. Second, the proposed semantics for *-dum* is at odds with that of *nēdum* itself.

To begin with the first point, there are cases where *nēdum* occurs in a prohibitive construction, but only late, as in the following example from Ausonius (310–395 CE):

- (45) in comitatu tibi verus fui, **nēdum** me peregre **existimes** composita fabulari.
 ‘At court I was truthful to you. **Let alone think** that when I am away I make up stories.’

AUSON. *Epist.* 1.32.4

Before this, there are indeed examples of *nēdum* that scope over matrix verbs, as noted above in section 2, but never in the second person singular:

- (46) a. *nēdum* + *First-person singular verb*
 Albam, unde ipsi oriundi erant, a fundamentis prouerunt, ne stirpis, ne memoria originum suarum exstaret. **nēdum** eos Capuae parsuros **credam**, cui infestiores quam Carthagini sunt.
 ‘Alba, from which they (= the Romans) themselves originated, they

razed to the ground, in order that (their) stock, in order that the line, the memory of their origins, might not survive. **Let alone would I believe** that they would spare Capua, to which they are more hostile than to Carthage.’

LIV. 26.13.16

b. *nēdum* + First-person plural verb

ita nec indumenta nec sedem nec victum poterit habere, aliis quidquid habuerit diripientibus. **nēdum putemus** caelestis imperii maiestatem sine ira et metu posse consistere.

‘Thus he [= a king who does not have anger] will be able to have neither clothing, nor a dwelling nor food, as others will snatch whatever he has. **Let alone are we to suppose** that the majesty of heavenly might can exist without anger and fear.’

LACT. *De ira dei* 23.11

It is then questionable whether cases like (43) have anything to do with the history of *nēdum*: these can after all simply be negative directives.

Following Löfstedt (1922), who argues for overlap between *dum* and the adverbs *iam* and *nunc*, Pascucci (1961:127 n. 2, 129) begins with a meaning ‘now’ for *dum*. The first coordinand of the *nēdum* construction asserts an unreal, hypothetical situation, in contrast to which stands the here-and-now reality of the *nēdum*-clause.¹⁴ He cites the following in support of his claim:

- (47) *optimis hercule temporibus, tum cum homines se non iactatione populari sed dignitate atque innocentia tuebantur, tamen nec P. Popilius neque Q. Metellus, clarissimi viri atque amplissimi, vim tribuniciam sustinere potuerunt, nēdum his temporibus, his moribus, his magistratibus sine vestra sapientia ac sine iudiciorum remediis salvi esse possimus.*

‘In the best times, by hercules, when men defended themselves, not by boastings for the populace, but by their own worth and innocence, still neither Publius Popilius, nor Quintus Metellus, most illustrious and most honourable men, could withstand the power of the tribunes, **let alone** in these times, with these customs, with these magistrates, could we possibly be saved without your wisdom, and without the recourse of the courts.’

CIC., *Pro Cluentio* 95

14 “[L]a sua funzione si esplica secondo una duplice direzione: una più propriamente temporale, che contrappone una presente situazione di fatto ad una realtà passata.”

One could substitute ‘not now’ for ‘let alone’ in this example, which would turn the scalar coordinator into a negative operator (with *nē* instead of the expected *non*, but I leave this issue aside) plus a temporal adverb. The sentence would now contain an assertion, which is precisely the problem, as this flies in the face of a central property of the *nēdum* construction, namely that it expresses entailed content, as established in section 4.2.

6.2 A New Analysis: Metalinguistic *nē* and *dum* ‘yet’

The origin of *nēdum* lies neither with purpose clauses nor prohibitive clauses, but rather in the metalinguistic use of *nē* and the aspectual adverb *dum* ‘yet.’¹⁵ Metalinguistic negation as described by e.g. Horn (1985), (2001), and Davis (2011), can be used to various ends, one of which is to deny the pragmatic assertability of a clause—as opposed to denying its truth, which is what descriptive negation does:

(48) Metalinguistic Negation

- a. I didn’t manage to trap two MONGEES—I managed to trap two mon-GOOSSES. (Horn 1985:132)
- b. I’m not his daughter—he’s my father. (Horn 1985:133)
- c. Around here we don’t (just) like coffee—we LOVE it. (Horn 1985:139, 143)

(49) Metalinguistic Conditionals

- a. If you’re thirsty, there’s some beer in the fridge. (Horn 1985:150)
- b. If the Cité is the heart of Paris, then the Latin Quarter is its soul. (Horn 1985:150)

Negation is used in (48) to deny the pragmatic acceptability of the utterance, not its truth value. In (48a), it is a question of plural morphology; in (48b), the denial has something to do with the implicatures of the two utterances; while in (48c), the negated phrase is insufficiently informative. In (49), the protasis does not restrict the truth-value of the apodosis, but rather, as argued by Horn

15 A cursory glance at the typological situation reveals two recurrent diachronic sources for scalar coordinators. The first is constructions involving in one way or another the denial of the speech act: French *sans parler de*, German *geschweige denn*, Dutch *niets te zeggen van*, Chinese 更不用说 (*gēng bú yòng shuō* [‘more not necessary say’]), English *let alone*, etc. The second involves a quantifier phrase, e.g. Italian *tanto meno*, Modern Greek *πόσο μάλλον*, Swedish *än mindre* ‘still less’, Slovenian *kaj šele* ‘what only,’ etc. *Nēdum* belongs to this second type.

(1985:150) “specifies a sufficient condition for the appropriateness or legitimacy of asserting the consequent.”

Metalinguistic *nē* is attested before Terence (Pinkster 1990:34–35 labels these ‘pseudo-purpose clauses’¹⁶):

(50) omnia alia, in quibus ecfirimur rebus, **ne ego multis loquar.**

‘All other things, in which we are extolled—to cut a long story short.’

LUCIL. 812 (p. 298.1 M)

Nē is metalinguistic here in that it tells us something about the discourse status of the preceding clause, namely that the speaker is not presenting a full account. As we have already established, *nēdum* itself has a metalinguistic character, in that it denies the assertability of an utterance.

Use of bare *nē* in the sense ‘let alone’ appears to be attested, but there is some question of how to interpret the data. *OLD*: s.v. 11c lists the following passage from Sallust (86–35 BCE) as the earliest example:¹⁷

(51) quippe secundae res sapientium animos fatigant, **ne illi corruptis moribus victoriae temperarent.**

‘As you would expect success wears down the minds of wise men, **let alone** are they temperate in victory when their morals have been corrupted.’

Cat. 11.8.

It is not clear how old this construction is. Although attested relatively late, it is entirely possible that it is an archaism (for a differing explanation, see Pascucci 1961:149–150). Its appearance in Sallust would then not be surprising, since his prose was known for its archaizing tendency, to judge by Suet. *De Grammaticis* 10. If this use really is old, then the origin of *nēdum* would lie in the specification of the scalar function of *nē* through the addition of *-dum*. This is what seems to have happened in Greek, for instance, where the negative operator μή has the sense ‘let alone’ when suffixed with various particles, e.g. μήτι (γε) and μή ὅτι. Alternatively, the use of *nē* in (51) may actually be derived from *nēdum*. There otherwise appears to be no agreement in the daughter languages as to

16 I am agnostic as to the question of whether the metalinguistic use of *nē* developed from its use in purpose clauses. Even if it did, this does not validate analyses that locate the origin of *nēdum* in purpose clauses (e.g. that of Walden), as purpose *nē* > metalinguistic *nē* is a separate change.

17 Similar is the use of *nē* for *nē* ... *quidem* ‘not even’: see *OLD*: s.v. 7.

the formations used in scalar coordination, which is actually not surprising, as this appears to be one of the more open functional classes cross-linguistically. Beside *nēdum* and *nē*, Latin also has *adeo*, *nē nunc*, *non modo*, and *nē dicam* (as well as nonce *nēdum dicam*). The diachronic profile of scalar coordinators thus resembles that of adversative coordinators, in that they are characterized by a faster rate of creation and replacement than conjunction and disjunction (Ramat and Mauri 2011).

6.2.1 *Dum*: From Aspectual Adverb to Scalar Coordinator

The second element of *nēdum* is the suffix *-dum*, which finds its source in the aspectual adverb *dum* ‘yet’.¹⁸ The first point to observe is that both *nēdum* and the aspectual adverb *dum* are scalar operators (Israel 1997, 2011:151–161). The latter orders two eventualities on a temporal scale, while the former orders two propositions on a scale of some contextually-determined type.¹⁹ We begin by looking at the use of the aspectual adverbs *nondum* ‘not yet’ and *neque dum* ‘and not yet,’ which are not used metalinguistically. As with other negative continuatives (see e.g. van der Auwera 1998), they indicate that a negative state continues to hold at reference time, as in the following exchange between Phaedromus and his slave Palinurus from Plautus’ *Curculio*. Phaedromus is up before dawn because he is in love with the slave Planesium, who is, however, in the possession of the pimp Cappadox. Palinurus asks (v. 50) whether she is a virgin, and Phaedromus replies that aside from some kissing she is chaste. To which his slave responds that kissing is the gateway to seduction, the implication of which is that her kissing has in fact led to intercourse. Phaedromus objects:

(52) at illa est pudica **neque dum** cubitat cum viris.

‘But she is chaste **and hasn’t yet** gone to bed with men.’

PLAUT. *Cur.* 57

18 The suffix is found in a handful of other function words with this sense: *nondum* ‘not yet’ (first in Plautus); *nequidum* ‘and not yet’ (first in Plautus); *etiamdum* ‘even yet’ (first in Plautus); *vixdum* ‘barely yet’ (first in Terence); *nihilidum* ‘nothing so far’ (first in Cicero); *hauidum* ‘not yet’ (first in Livy). Elsewhere the aspectual semantics differ, e.g. *interdum* ‘occasionally, now and then [i.e., within a while]’ and *dudum* ‘for a long time up to the present’ (both first in Plautus). As a complementizer, *dum* means ‘while, provided that, until.’ For recent descriptions, see Poirier (1996), Mellet (1996), Poirier (1998), (2009); Wölfflin (1898) is still useful.

19 This type of change is relatively well known, see e.g. van der Auwera (1998:34), as well as König (1977) and Löbner (1989) for German; for English *already* and *yet*, Traugott and Waterhouse (1969).

While *neque dum* in this example does not mean ‘let alone,’ it is nevertheless instructive, as we can observe the crucial components of the semantics of the scalar coordinator in the aspectual adverb. In particular, the entailment relationship that exists between the left and right coordinands: not having slept with men follows from the property of *pudicitia* (prototypically, at least). This is the selfsame relationship that we find with *nēdum*.

The following example from the lost *Dyscolus* is very similar, but unfortunately we lack the surrounding context (the passage has also been subject to emendation):

- (53) *virgo sum: nondum didici nupta verba dicere.*
 ‘I’m a virgin: I haven’t yet learned how to talk dirty.’
 PLAUT. fr. 71 (= Festus 174.7 Lindsay)

While the meaning of *nupta verba* is uncertain (Varela 1994, Lentano 1995), it seems reasonably safe to assume that it refers to some sort of sexual activity that virgins have no experience with. The speaker’s assertion that she is a *virgo* places her at the minimum endpoint on a scale of sexual experience, and thus resembles the emphatic assertions that we find in the left coordinand of the *nēdum*-construction. As with the previous example, we again have a case where the clause with the aspectual adverb is entailed by the preceding proposition. While a ‘let alone’-reading is not intended in either of these examples, they do reveal a link between negative continuatives and scalar coordination.

The similarity of the negative continuative ‘not yet’ to ‘let alone’ is even stronger in cases where the first coordinand contains an overt scalar expression (such as we find so often with the *nēdum*-construction itself). In the following example from the close of Vergil’s second *Georgic*, one can get both an aspectual and a scalar reading of the second *necdum*:

- (54) *necdum etiam audierant inflari classica, necdum*
inpositos duris crepitare incudibus enses.
 ‘They had **not yet even** heard the trumpet calls blow, **nor yet** swords
 clanging on hard anvils.’
 ‘They had **not yet even** heard the trumpet calls blow, **let alone** swords
 clanging on hard anvils.’
 VERG. *Georg.* 2.539–540

On the temporal reading, Vergil is describing the continuation of a time in which war-trumpets and swords were unknown, an agricultural golden age that

stands in stark contrast to the time when the poems were being composed. I presume that this is the intended (or at least primary) sense. On the scalar reading (triggered by the *etiam*), trumpets and swords are ordered on a scale of martial force, whereby the lack of experience with the former entails a lack of experience with the latter. This type of emphatic context appears to be the context in which the change from 'not yet' to 'let alone' took place.

While the above examples illustrate the overlap between 'not yet' and 'let alone,' they lack the metalinguistic character of the *nēdum*-construction. So how then how do we actually get to the form *nēdum*? Unfortunately the data permit only an approximate answer. There are to my mind two main possibilities. The first is that, on the basis of examples like (52)–(54), speakers suffixed scalar *-dum* to metalinguistic *nē*. The change would essentially have been one of novel word formation. Alternatively, there may have existed clauses with *nē dum*, in which *dum* still meant 'yet,' while together the syntagm meant 'not that yet.' This string could have coalesced to yield *nēdum*. The neg-raising examples cited above are possibly relics of this stage. I repeat here the earliest (from Livy), with a different translation to reflect the aspectual interpretation of *nēdum*:

- (55) *Albam, unde ipsi oriundi erant, a fundamentis proruerunt, ne stirpis, ne memoria originum suarum exstaret. nēdum eos Capuae parsuros credam, cui infestiores quam Carthagini sunt.*

'Alba, from which they [= the Romans] themselves originated, they razed to the ground, in order that (their) stock, in order that the line, the memory of their origins, might not survive. **Not that I would yet** believe that they would spare Capua, to which they are more hostile than Carthage.'

LIV. 26.13.16

Under an interpretation in which *nēdum* here means 'not that yet,' it is not yet a coordinator, but rather signals the rejection of some proposition that is expected to hold.

I incline toward the first explanation for two reasons. The first is comparison with the form *primumdum* 'first of all.' The suffix *-dum* here resembles that of *nēdum*, inasmuch as it contributes a metalinguistic sense: *primumdum* is used to order propositions in discourse. It is hard to imagine that this form represents anything but the suffixation of *-dum* to *primum* (i.e., and not coalescence of a syntagm *primum dum*). Second, while the relationship between frequency and grammaticalization is far from clear, it is generally believed that a certain threshold of frequency needs to be reached for lexicalization to take place (see e.g. Lindquist and Mair 2004, Bybee 2006). If there really did exist a *nē dum* 'not

that yet'-construction, it would have to have reached some threshold of frequency to become the scalar coordinator *nēdum*. As a result, we would expect some residual traces of this earlier usage, but these do not seem to exist. If we are to believe that cases like (55) are in fact relics of this previous stage, it is puzzling that they do not show up before Livy.

7 Summing Up

I have argued that the origin of *nēdum* lies in the metalinguistic function of *nē* and the aspectual adverb *dum* 'yet': the former signals that a proposition is not worthy of assertion, while the latter contributes scalar semantics. The sense 'let alone' developed in the context of a preceding emphatic assertion. The distributional properties of *nēdum* fall out directly from its lexical semantics, specifically the requirement that its left coordinand not simply be semantically stronger than its right, but also that it be either a scalar maximum or minimum. The subsequent development from 'let alone' > 'not just' took place in positive-polarity clauses with a scalar focus in the left coordinand.

This study has offered a fine-grained look at the semantics and pragmatics of the *nēdum*-construction in an attempt to offer a starting point for further studies of scalarity and aspectual quantification in archaic Indo-European. These are two areas of grammar where our understanding is only nascent. Further investigation is sure to yield new insights, both on the nature of grammaticalization as well as on the development of function words in archaic Indo-European in general.

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