Against ‘expletive’ negation: The case of Spanish hasta-clauses

The problem. Spanish sentences (1a)-(2a) have traditionally been treated as identical in meaning to (1b)-(2b), respectively. The latter have been described as containing an ‘expletive’ negation in the hasta-clause, ‘until’, i.e. a vacuous negation that does not change the meaning of the sentence (Van der Wouden 1994; Espinal 2000). I show that the negation in the hasta-clause does in fact contribute to the meaning calculation. The novelty of my proposal is the comparison of the aspect (specifically, the durativity component) of the eventualities expressed in the hasta-clause, which supports the claim that the truth conditions for each pair of sentences are similar but not identical.

(1) Non-durative eventuality (achievement) in the hasta-clause
a. Ana no se irá [hasta que María llegue a casa]  
   Ana NEG CL will go until that María arrives.SUBJ to house
   ‘Ana won’t leave until Maria arrives home’

b. Ana no se irá [hasta que María no llegue a casa]  
   Ana NEG CL will go until that María NEG arrives.SUBJ to house
   ‘Ana won’t leave until Maria arrives home’

(2) Durative eventuality (accomplishment) in the hasta-clause
a. Ana no se irá [hasta que María cante el himno nacional]  
   Ana NEG CL will go until that María sings.SUBJ the anthem national
   ‘Ana won’t leave until Maria sings the national anthem’

b. Ana no se irá [hasta que María no cante el himno nacional]  
   Ana NEG CL will go until that María NEG sings.SUBJ the anthem national
   ‘Ana won’t leave until Maria sings the national anthem’

Interpreting the hasta-clause. The hasta-clause in (1)-(2) is interpreted as punctual: it does not express the length of a durative eventuality but locates punctual eventualities in time (Karttunen 1974; Giannakidou 2002; Condoravdi 2002). The sentences in (1)-(2) are inconsistent with Ana not leaving at all, so punctual hasta triggers the factivity inference that the eventuality in the main clause must hold. The time expressed in the hasta-clause is at the very beginning of the stretch in which the eventuality in the main clause is expected to hold. Accordingly, sentence (1a) asserts that Ana’s leaving does not hold at time interval ending when Maria arrives home, generates the factivity inference that Ana will leave at some subinterval in the interval beginning when Maria arrives home, and scalarly means that Ana will leave when Maria arrives home (or shortly thereafter) (see FIGURE 1). Mutatis mutandis, this also applies for (2a), although it is worth noting that, since the hasta-clause in (2a) denotes an accomplishment (which is durative), the scalar meaning points to the interval in which Mary is singing (see FIGURE 2). This will turn out to be relevant for the interpretation of the so-called ‘expletive’ negation.

Let us assume $P$ and $Q$ are the predicates in the main clause and the hasta-clause, respectively; $t$ is a variable for a time interval, and $t'$ for a contextually-determined interval; $<$ and $>$ express ‘precedes’ and ‘succeeds’, respectively. The semantics for punctual hasta appears in (3):

(3) Semantics for punctual hasta
a. Assertion: \[ \exists t \exists e \ [Q(t) \land P(e) \land \neg \exists t' [r < t \land P(t')]] \]
b. Factivity inference: \[ \exists t \exists e \ [Q(t) \land P(e) \land \exists t' [r < t \land P(t')]] \]
c. Scalar interpretation: \[ \exists t \exists e \ [Q(t) \land P(e) \land \exists t' [r = t \land P(t')]] \]

The negation in the hasta-clause. Let us recall that both sentences in (2) contain a durative eventuality (an accomplishment) in the hasta-clause. Consider the following context. Ana wants leave exactly when Maria starts singing the national anthem or while she is singing the first verses at most. In this context, sentence (2a) is true, but sentence (2b) is false. This is so because by uttering (2b) the speaker is assuming that Ana will make sure Maria
sings the whole national anthem and that she will leave once Maria finishes singing the whole national anthem. This suggests that the so-called ‘expletive’ negation is indeed playing a role: it negates that the eventuality in the main clause holds during the interval explicitly denoted in the hasta-clause, and restricts the factivity inference to the complement of said interval. The result is that the eventuality in the main clause is expected to hold after the eventuality in the hasta-clause is finished, i.e. for (2b), once the duration of the accomplishment is over (see Figure 4). This effect is not so evident in (1b), where the lack of durativity of the achievement in the hasta-clause and the extremely fine level of granularity of its temporal trace (Krifka 1998) creates the illusion of expletiveness and hides the difference (see Figure 3, where granularity has been added).

Figure 3. Interpretation of (1b)  
Figure 4. Interpretation of (2b)

If the eventuality in the main clause will not hold in the interval denoted in the hasta-clause, the assertion is different from (3a). This is expressed in (4a), where the contribution of the ‘expletive’ negation is underlined. Consequently, the factivity inference (4b) and the scalar interpretation (4c) are also different, the latter being that the eventuality will hold immediately after (>,i the eventuality in the hasta-clause is finished (or shortly thereafter).

(4) Semantics for punctual hasta + ‘expletive’ negation

a. Assertion + ‘expletive’ negation:  
\[ \exists t \exists e [Q(t) \land P(e) \land \neg P(t) \land \neg \exists t' [t' < t \land P(t')]] \]

b. Factivity inference:  
\[ \exists t \exists e [Q(t) \land P(e) \land \exists t' [t' > t \land P(t')]] \]

c. Scalar interpretation:  
\[ \exists t \exists e [Q(t) \land P(e) \land \exists t' [t' > t \land P(t')]] \]

Further issues. Let us recall that the sentences in (1)-(2) are inconsistent with Ana not leaving after the eventuality expressed in the hasta-clause. I argue that the so-called ‘expletive’ negation is licensed in the punctual hasta-clause because it is sensitive to the change of state expressed by punctual hasta (the factivity inference). This is the reason why the ‘expletive’ negation is not allowed in durative hasta-clauses (i.e. the ones that are compatible with atelic predicates in the main clause, Karttunen 1974). In a very similar way, the so-called ‘expletive’ negation does play a role in the delimitation of the interval expressed in temporal adverbial clauses in other languages (e.g. German bevor-clauses ‘before’ (Krifka 2010), Korean –ci-clauses ‘since’ (Yoon 2011), a.o.).

Conclusions. I have shown that the so-called ‘expletive’ negation in Spanish hasta-clauses is not semantically vacuous, but does contribute to the meaning of the sentence. The assertion of a sentence with ‘expletive’ negation in the hasta-clause entails the one of a sentence without it, but the opposite is not true. Consequently, their truth conditions are similar but not identical, and it is safe to say that the ‘expletive’ negation is not expletive after all.