

On *Gradually**

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1. Introduction

Piñón (2000) investigates the English adverb *gradually* and makes interesting observations about its syntactic and semantic behavior. In this paper we pick up one of the points of his analysis and examine its validity and point out some problems. We also try to suggest an alternative approach.

2. The concept of "scope over tense"

The point we are going to discuss is Piñón's concept of "scope over tense." First we will give a brief survey of this idea. According to Piñón, the adverb can occur in three basic positions which are initial, preverbal, and postverbal as shown in the following:

- (1)a. Gradually(,) the ice melted. (initial)
- b. The ice gradually melted. (preverbal)
- c. The ice melted gradually. (postverbal)

Based on his statistical survey of a corpus, Piñón decides that among these three positions the preverbal one is the default position for this adverb. He also assumes that the lexical semantics of the adverb remains the same across position. As to initial position, Piñón ponders the reason why *gradually* appears there and draw a conclusion that it appears there to have scope over tense. Observe the following:

- (2)a. Gradually there's no more work for her.
- b. Gradually, Peter loved Mary.

In fact, the examples in (2) are unacceptable as they are because of the incompatibility between *gradually* and the event type of the containing sentences, which in these cases is a state.¹ According to Piñón, this incompatibility becomes clear when the adverb is put in postverbal position like this:

- (3)a. #There's no more work for her gradually.

b.#Peter loved Mary gradually.

Piñón observes that there is a difference between the examples in (2) and those in (3) and that difference lies in the possibility of reinterpretation. That is, reinterpretation is possible in (2), leading to acceptability, whereas it is impossible in (3), resulting in unacceptability. One can reinterpret (2a) as an assertion that it gradually comes about that there's no more work for her. Also (2b) can be reinterpreted as asserting that Peter gradually came to love Mary. Piñón attributes this kind of reinterpretation to the occurrence of *gradually* in initial or preverbal position.² He contends that when *gradually* appears in these positions, it comes to have scope over tense and the consequence is the reinterpretation in which "*gradually* asserts gradualness not of the situation directly described by the clause but rather of what leads up to that situation" (Piñón: 447).³

3. Problems with the concept of "scope over tense"

According to Piñón's explanation given above, the concept of scope over tense expresses the effect which *gradually* brings about on some temporal interpretation of the modified sentence when it occupies initial position. When it takes scope over tense, *gradually* adds the preliminary stage to the event described by the sentence and expresses the gradualness of the development of that stage, and as a result, it gives rise to what is called inchoative interpretation.⁴ If our understanding of this concept is correct, there arise some problems.

The first problem is related to nomenclature. Tense as is generally known expresses the time of an event relative to some other time, typically, the time of utterance. However, when Piñón talks of "scope over tense," he actually means a certain kind of aspectual effect on interpretation. The effect is not on the temporal location of an event, but on the temporal property of an event. In this respect, we believe that the use of the term "tense" is rather misleading. The term aspect or event would probably be more appropriate. However, we cannot simply substitute aspect for tense here, because in order to do that we need a syntactic category which reflects lexical aspect and which functions in the same way as the syntactic category of tense in the context in question. We know that there are several proposals of the syntactic analysis of lexical aspect or event, for example, Borer (1993), Ramchand (1997) and Ritter and Rosen (1998), yet it is not clear whether the syntactic category AP (Aspect Phrase) or its equivalents proposed by these linguists can replace tense in this context. Further,

we cannot replace "tense" with "event" either because the intended sense of "scope over tense" may not be equivalent to "scope over an event" in its ordinary sense. The latter would simply mean that some event is a target domain of modification by some linguistic material. Therefore, for the moment, we will continue to use Piñón's label as it is with the problem pointed out above in our mind.

The second problem concerns factual observation. Although Piñón claims that the syntactic position which the adverb *gradually* occupies is vital for the adverb taking scope over tense, there are examples which seem to show that that is not necessarily the case. Observe the following (underlines added):

- (4)a. There is a guy at our youth group that I have got to know gradually and at the end of youth group he was sitting on the edge of the stage by himself and just look really mad.
(http://guitar-girl2.diaryland.com/020920_28.html)
- b. I can't imagine how I will feel when I actually leave. Even though I am only moving to a different city, I know gradually that we will drift apart. And one day we might even forget each other.
(<http://www.ujournal.org/users/flare/22132.html?thread=10356>)
- (5) Did you like me the first time we met or gradually?
Well, I was attracted to you when we first met... does that count?
(<http://www.frozentears.net/laura/survey3.txt>)
- (6) Other features and information will be available gradually and on a regular basis. We will endeavour to continue enhancing our technical and professional support.
(<http://www.intop.ca/intop/interp7.htm>)

In the above examples *gradually* occurs with stative verbs (*know*, *like* and *be*) and it follows these verbs. According to Piñón's prediction, these examples would be anomalous because the position of *gradually* would not allow the reinterpretation. There it cannot take scope over tense. However, it is obvious that they involve the reinterpretation parallel to the sentences in (2). In (4), "know gradually" can be paraphrased as "come to know gradually," and "like me gradually" in (5) can be taken as meaning "come to like me gradually." "be available gradually" in (6) is paraphrasable as "become available gradually." Therefore, it seems that the syntactic position which the adverb holds is not important for the reinterpretation. That will

lead us to doubt whether the syntactically-based concept of "scope over tense" is really necessary, at least for stative events.

4. An alternative approach

It is important to notice that *gradually* is not the only adverb that gives rise to the reinterpretation under discussion. Semantically and functionally similar adverbs can also cause the same reinterpretation as shown in the following (underlines added):

- (7)a. Did you like 'em immediately?
 (<http://www.his.com/~vann/LoSstuff/Survey.htm>)
- b. Of course, but I did not LOVE them immediately.
 (<http://www.his.com/~vann/LoSstuff/Survey.htm>)
- c. Q: How long does it take to get my service active?
 A: In most areas, your service will be active instantly. In some other areas it will be within 24-48 hours. Phones programmed on Fridays may take up to 72 hours (3 days) to be activated.
 (<http://www.topptelecom.com/content/faq14.html>)
- d. I knew instantly what was needed.
 (<http://www.outpostproject.com/pub/lusk.html>)

The examples in (7) are all subject to the reinterpretation and it brings about inchoative readings. "Come to V" in (7a), (7b) and (7d) and "become A" in (7c).

Further, we can compare these and the examples of the reinterpretation with *gradually* with more commonly discussed examples like the following which involve dynamic events as well as states:

- (8)a. Betsy knew the answer at five o'clock. (Olsen (1997:44))
 b. Mary was sick in an hour. (Smith (1997:47))
- (9)a. ?At three o'clock the fly swam in the soup.⁵ (Filip (1999:113))
 b. The energetic toddler destroyed the house at noon. (Olsen (1997:43))
 c. Matt ran at three-thirty. (Olsen (1997:43))
 d. They ate dinner at noon. (Smith (1994:49))

We are forced to reinterpret all the examples in (8) and (9) as inchoative events. It is generally assumed that this kind of reinterpretation emerges as a result of the process

of an event type shift.⁶ The shift is caused by an added adverbial. It is significant to observe that in this respect, the examples in (4), (7) and (8) are the same. This enables us to understand the reinterpretation involving *gradually* from a different perspective. It is not a syntactically defined scope relation between the adverb *gradually* and tense, but an event type shift that is actually responsible for the reinterpretation. Moreover, as has already been pointed out, the concept of scope over tense cannot deal with cases such as (4)-(6). Therefore, we propose that the reinterpretation in question should be dealt with as cases of an event type shift.

5. Other problems

Before ending our discussion, we would like to point out some other problems with Piñón's analysis and give a brief exposition about them.

One problem is provided by the following examples describing accomplishments which are given by Piñón.

- (10)a. Gradually, the Nigerians pushed the rebels out of Freetown.
- b. Gradually the practice [of using curse words] seeped onto TV through cable channels and then so-called pioneering dramas like *NYPD Blue*, [...]

According to Piñón, in these examples *gradually* in initial position also takes scope over tense. (10a) means that "it gradually *came about* that the Nigerians pushed the rebels out of Freetown" (Piñón (2000:447)). He claims that here the same inchoative sense is added as in the examples in (2). Piñón seems to be implying that when *gradually* occurs with an accomplishment in postverbal position, it does not yield a "come about" reading and it just modifies the event expressed by the sentence and describes the gradualness of that event itself. Therefore, it follows that there is some difference in meaning between the two positions.

As a matter of fact, accomplishments can take on an inchoative sense in a different context as well, as shown in the examples (9b) and (9d) which will be repeated below for the ease of reference:

- (11)a. The energetic toddler destroyed the house at noon. [= (9b)]
- b. They ate dinner at noon. [= (9d)]

However, it is important to note that there is a difference between (10) and (11).

The difference is that in (10) the adverb and the event type are compatible, while in (11) they are incompatible.⁷ That is, in the latter, the normal reading of the accomplishment is impossible, and hence the reinterpretation is forced.⁸ On the other hand, in cases like (10), there seems to be no reason for the reinterpretation. In fact, according to our informant, no difference in reading can be found in the following pairs of sentences expressing accomplishments, which are given by Piñón himself.⁹

- (12)a. Gradually the ice melted.
 b. The ice melted gradually.

If Piñón's observation is correct, then it would mean that we cannot get rid of the concept of scope over tense completely. That is, the event type shift associated with the combination of *gradually* and accomplishments would be dependent on the position of the adverb. However, as pointed above, in the case of accomplishments there appears to be no grounds for reinterpreting them when they occur with *gradually*. This situation is something of a mystery. It requires more detailed examination of the relevant data to get to a clear understanding.

Now let's consider other event types. First, we take up activities. Piñón does not deal with the possibility of the reinterpretation with respect to activities, simply stating that "many activities [...] are incompatible with *gradually*."¹⁰ He further notes that in order for activities to be compatible with *gradually*, expressions such as *more and more* which add the meaning of scale of change are necessary. Observe the following contrast provided by Piñón:

- (13)a. #Mary gradually ran.
 b. Mary gradually ran more and more quickly (towards the finish).
 (14)a. #Peter gradually wrote letters (to his mother).
 b. Peter gradually wrote more and more letters (to his mother).¹¹

In fact, it seems that the cooccurrence of *gradually* and activities is not impossible without scalar expressions as shown in the following (underlines added):

- (15)a. Lower your head back into the water and feel the lightness of the hands on the bottom. Gradually practice floating free. This will take time and a nice, calm sea.

(<http://www.brinternet.com/~jhpart/bkswim1.htm>)

- b. She began to soap herself up, gradually rubbing up and down her legs, still feeling the throbbing feeling ... (<http://www.koolickskisses.com/Page8.html>)

(16)a. As I said earlier, the trick is to do things gradually, rather than hitting them with half an hour's technique in one go. And you need to get the dancers on your side.

(<http://www.colinhume.com/dtteach.htm>)

- b. At first he rented furnished rooms, the worst, then he gradually accumulated chairs and lamps and tables and chests of drawers and arranged them in his own apartments.

(http://www.choicesofmen.com/ch_one.htm)

The examples in (15) involve activity predicates and those in (16) derived activity predicates which are originally accomplishments. The former correspond to (13a) and the latter to (14a).¹² It is expected that many activities show the same behavior as states when they occur with the adverb *gradually*, resulting in the reinterpretation regardless of its position. The reason is that just like states, they are incompatible with the adverb and therefore if they cooccur at all the reinterpretation is necessary regardless of the adverb's position. However, the judgment of our informant on the examples in (15) and (16) does not fully conform to our expectation.¹³ Here again, in-depth inspection of the relevant data is necessary.

As for achievements, Piñón (2000:451) just states that "*gradually* forces an achievement to be reinterpreted as an accomplishment" and presents the following examples:

(17)a. The speaker only gradually realizes what the weather is telling her: "as I looked (for things did not look) up."

b. Mary gradually noticed the new student in her class.

c. Peter gradually reached the summit.

It seems that there is a difference in interpretation here. (17a) and (17b) can be paraphrased as "gradually comes/came to V," whereas (17c) can be restated as "gradually came nearer and nearer to."¹⁴ The difference is that in the former gradualness applies to the events described by the sentences, while in the latter it

applies not to the event itself but to the preliminary stage of the event. Note that *realize* and *notice* both mean "become aware of." That is, they have an inchoative sense from the first. We wonder whether the reinterpretation is actually occurring in these cases. Is there really a difference in meaning between, for example, "gradually come to realize" which in turn literally means "gradually come to become aware of" and "gradually realize" which in turn means "gradually become aware of." If there was no difference, then (17a) and (17b) would not be instances of the reinterpretation resulting from *gradually* taking scope over tense, but instead they would be simply instances of *gradually* taking scope over the modified sentence, whereby *gradually* extends the original punctual events to the events with duration.¹⁵ On the other hand, (17c) may be an instance of the reinterpretation because here *gradually* is combined not with the event itself but with the preliminary stage leading to that event. The contrast between (17a-b) and (17c) suggests that there remains a possibility that the cooccurrence of *gradually* and achievements does not always result in the reinterpretation.¹⁶

In this section we have made a hurried survey of the possibility of the reinterpretation when *gradually* is associated with events other than states and discussed several problems. Although Piñón's analysis is not comprehensive enough to allow us to evaluate its validity fairly, all in all, the results only partially conform to what it would predict. It has been made clear that assuming the correctness of Piñón's observation, accomplishments show a behavior different from other three events with regard to the reinterpretation, although the reason for this somewhat peculiar behavior is yet to be explicated. It might be the case that initial position has some special function and that is what Piñón is assuming.

6. Conclusion

In this paper we have pointed out several problems with Piñón's concept of scope over tense. We have shown that this concept is not essential when *gradually* and states cooccur. We have proposed that the reinterpretation allegedly associated with the concept is better dealt with in terms of event type shifts. That seems to apply to activities and achievements as well. The position of *gradually* is not relevant for the reinterpretation of these event types. On the other hand, with respect to accomplishments, there still remains the possibility that the position of the adverb is important for the reinterpretation if Piñón's observation is correct. The reason for this contrast between states, activities and achievements on the one hand and

accomplishments on the other, if it is real, must be explained. Based on our analysis and discussion, we are driven to conclude that Piñón's analysis is far from satisfactory. What we need is a thorough examination of the interaction of *gradually*, event types and possible positions of the adverb, which, if carried out successfully, will have interesting implications for the issue of the relation between the syntactic position of adverbials and their interpretation, which is one of the main topics of recent studies of adverbials (see, for example, Frey (2003) and Shaer (2003) for discussion).

Notes

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¹ Here, we use the term "event" in its wider sense, equivalent to "situation" or "eventuality."

² In fact, Piñón (2000:448) states that initial position is more preferable for the reinterpretation than preverbal position.

³ Our informant does not accept either (2) or (3) even under the reinterpretation.

⁴ We will use the term "inchoative" uniformly for this type of reinterpretation. See Smith (1994:49) for the possibility of distinguishing the beginning of an event into an inchoative and an inceptive.

⁵ The question mark indicates that the sentence is awkward without the reinterpretation.

⁶ This is our adaptation of the term "situation type shift" used by Smith (1997).

⁷ Piñón states that *gradually* occurs with a wide range of accomplishments. Also see Bertinetto and Squartini (1995) for this point. For example, what is called degree achievements (Dowty (1979), Bertinetto and Squartini (1995), Hay (1998) and Hay, Kennedy and Levin (1999)) cooccur with *gradually* in their accomplishment uses (as well as in their activity uses). On the other hand, according to our informant, accomplishments such as "write a letter" and "eat an apple" are not consonant with it.

⁸ See Smith (1997:49). She states that "[t]he inceptive understanding of a sentence is natural in contexts which make the basic-level reading of the verb constellation implausible or unlikely."

⁹ Unfortunately, Piñón does not say anything about whether there is the same difference here as in (10).

¹⁰ Degree achievements used as activities are compatible with the adverb.

¹¹ Our informant finds (13a) and (14a) to be equally unacceptable and comments that these forms are awkward even under the reinterpretation.

¹² In fact, we are not certain if it would be correct to call the relevant part of (15b) as a derived activity because in this case there is no contrast between an indefinite singular object NP which leads to an accomplishment and an indefinite plural object NP which results in a derived activity. The verb *accumulate* does not accept an indefinite singular NP as its object due to its semantics.

¹³ According to our informant, (15a) can be interpreted as "gradually start to practice floating free" and this is in accord with our expectation. She says that (15b) describes the gradualness of the action itself. (16a) also expresses the gradualness of the action and it roughly means "do things step by step." The same holds true for (16b) and it describes gradual accumulation of furniture. Thus, the result is that only (15a) supports our prediction.

¹⁴ The source of this difference may be attributed to the difference of the semantics of verbs or verb phrases.

¹⁵ We have asked our informant to judge the following pairs of sentences:

- (i)a. Gradually he realized that he was the cause of the accident.
- b. He realized gradually that he was the cause of the accident.
- (ii)a. Gradually Mary noticed the new student in her class.
- b. Mary noticed the new student in her class gradually.
- (iii)a. Gradually Peter reached the summit.
- b. Peter reached the summit gradually.

The result is that (ia) and (iia) are more natural than (ib) and (iib). Still, all of them involve the sense "gradually become aware of." Thus, it seems that position is irrelevant for the reinterpretation and *gradually* modifies the event itself. This may lend support to our statement concerning (17a) and (17b) in the text. With respect to (iii), both are judged to be awkward.

¹⁶ Strangely, Piñón does not use examples with *gradually* in initial position which are, according to him, most appropriate for the reinterpretation. Furthermore, Piñón does not mention whether the difference in the position of the adverb can lead to the difference in interpretation in the case of achievements, although it can be predicted that the reinterpretation will be forced without regard to the position of the adverb in cases such as (iii) in note 15 where *gradually* and achievements are not congruent.

Incidentally, if our observation on the examples (17a) and (17b) is correct, it suggests that the reinterpretation under discussion and an event type shift does not always coincide, because in these examples there seem to be no reinterpretation at work, while their event type

shifts from achievement to accomplishment. In other words, an event type shift does not entail the reinterpretation in Piñón's sense. This is expected when we consider the fact that the effects of the former on aspectual interpretation are diverse and the latter is only a subcase of them.

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