On the (im)perfect correlations between scales and aspect: deverbal adjectives in *-ivo*

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Abstract
This article explores the possibility that lexical categories share a common set of primitive notions (Mourelatos 1978) that get translated to different domains, each one of them expressed by a different category (Jackendoff 2002). The empirical side of this paper discusses the correlations between Aktionsart and scale structure in the case of deverbal adjectives with the affix -ivo '-ive'. It is shown that there is initial plausibility that unbounded events translate as open scales, while bounded events become upper-closed scales. This supports a program of research where derivational affixes are transitioners from one domain to the other, and whose job is to adapt the notions found on the base to a language that is interpretable inside the new lexical category.

1   The shape of the problem

Pavol Štekauer's work has a pervasive property that strikes the reader even after only a few paragraphs: the way in which thought-provoking hypotheses are tested against a detailed and rich pattern of data, making patterns emerge from what seemed to be chaotic. The problem that we are going to discuss here, we hope, has the ingredients of the kind of research that Pavol has successfully conducted for many years.

Consider the relation between different grammatical categories, specially nouns, verbs and adjectives. In some approaches, these three categories are treated as entities that –in principle– are defined independently of each other, each one with their own internal vocabulary of relevant features, each one combining with different sets of (syntactic) projections. Early phrase structure rules (Chomsky 1957), for instance, simply assigned labels to each one of the categories (N, V, A...), and that was the end of

the story. Later on, X-bar rules (Chomsky 1970, Stowell 1981) divorced the structure entirely from the category label, and following the same essential philosophy Distributed Morphology (Halle & Marantz 1993) has treated lexical categories as distinct sets of functional features, with what is common among similar words depending on the properties of an uncategorised root (Marantz 1997).

However, other accounts have always tried to derive grammatical categories from a common vocabulary of items. Several solutions have been attempted. What is common across categories could be a set of possible structural configurations (Hale & Keyser 2002), a set of semantic features (Jackendoff 1991, 2002), different values of the same abstract features (Chomsky 1970) or the presence vs. absence of a reduced set of formal syntactic features (Baker 2003). However, any solution of this kind will take us to the same conclusion: there must be some shared features between N and A, A and V, N and V, and those features must be instantiated in slightly different ways in the context of each category. Mourelatos (1978), Hoepelman & Rohrer (1980) and Bach (1986) advocated in favour of this idea.

Empirically, the idea that grammatical categories must share some common vocabulary is almost inescapable. We know that a notion like telicity –related to verbal aspect– is sensitive to two notions that are, respectively, nominal and adjectival. In a pair like (1), the telicity of the verbal predicate matches the countability of the internal argument –as many have noted, among them Krifka (1989), Tenny (1986)–, while the deadjectival verbs in (2) behave like degree achievements or like telic changes of state depending on whether the base adjective has an open or closed scale (Hay, Kennedy & Levin 1999).

(1)   a. John ate paella (for two hours).
       b. John ate a paella (in two hours).
(2)   a. John whitened his teeth for three months.
       b. John perfected his article in three months.

Unless adjectives –through scale structure–, verbs –through aspect– and nouns –through countability– share some common set of features, these cases, where a value of one domain is translated into a value of another, would be completely unexpected.

The goal of this paper is to explore the correlation between the aspectual properties of verbs and the scale properties of an adjective morphologically derived from those verbs. We will concentrate on Spanish deverbal adjectives built with the suffix *-ivo*, and explore whether the correlation is perfect or imperfect, and whenever mismatches arise, what the cause could be.

2   Preliminaries

The question that we will try to answer in this article is the following: Is there a direct correlation between the scalar properties of a deverbal adjective in *-ivo* and the telicity of its base? Of course, before we dive deeply into the data, three things have to be clarified: what the properties of *-ivo* are (§2.1), what we understand for 'telicity' here (§2.2) and how we diagnose the scalar properties of an adjective (§2.3).

2.1 The suffix –ivo

This suffix is one of the few that in Spanish produces adjectives directly from verbs. Searching in *DRAE, María Moliner* and other dictionaries gave us slightly over 500 forms ending in *-ivo*, which, after eliminating those that did not belong to the relevant category[70] or did not have a verbal base in contemporary Spanish, became 347 forms. With few exceptions (eg., 3), all verbs that produce *-ivo* adjectives are dynamic, including both telics (4a) and atelics (4b). Some of these complex words contain a verbal stem with a theme vowel (ThV) (4b), while others don't (4a).

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[70] Next to the usual cases where the sequence of sounds did not correspond to the relevant morphemes, we eliminated for instance some deverbal nouns not used anymore as adjectives, such as (i).
(i)   don-a-tivo
        give-ThV-ivo
        donative

(3)   am-a-tivo
       love-ThV-ivo, 'prone to loving'
(4)   a. destruct-ivo
          destroy-ivo, 'destructive'
       b. pens-a-tivo
          think-ThV-ivo, 'pensive'

The affix, on the surface, shows two allomorphs: *-tivo* and *-ivo*. *-tivo* is used in those cases where the base ends in the theme vowel (eg., 5), while *-ivo* is used after consonants, specifically after /t/ and /s/. That only these two consonants are found on the bases can be understood because, historically, the affix attached to Latin participial bases (Pharies 2002: 370) –but note that it does not attach to participles in contemporary Spanish–.

(5)   a. exclam-a-tivo
          exclaim-ThV-ivo, 'exclamative'
       b. impos-i-tivo (cf. *impues-to* 'imposed')
          impose-ThV-ivo 'domineering'

(6)   a. deduct-ivo (cf. *deduct-or*, 'deductor')
          deduce-ivo, 'deductive'
       b. decis-ivo (cf. *decis-ión*, 'decision')
          decide-ivo, 'decisive'

Sometimes, the suffix attaches to the root, without the theme vowel (ThV), and sometimes it attaches to the verbal stem –including the ThV–, for historical reasons, the verbal stem that is used for the participle (remember 5b).

(7)   a. invent-ivo
          invent-ivo 'inventive'
       b. congel-a-tivo
          freeze-ThV-ive 'freezing'

Malkiel (1941) recognised two interpretations in the Latin ancestor of *-ivo*, *-ivus*, which are preserved in the Spanish version: a passive meaning 'that (potentially) is V-ed' (8a), and an active meaning 'that (potentially) V-s' (8b). The active meaning is, by far, the most common, while there is only a clear passive meaning in a handful of forms (such as *adoptivo* 'adopted'; *donativo* 'donated' or *extensivo* 'extended', 7 in our corpus).

(8)   a. opt-a-tivo
            choose-ThV-ivo 'that can be chosen'
        b. provoc-a-tivo
            provoke-ThV-ivo 'that can provoke, that provokes'

Finally, there are a handful of forms with demotivated meaning –in the sense that the meaning of the adjective is not any of the meanings that the verb has in contemporary Spanish–. There are few of these: just 6 clear instances in our corpus, an example of which is provided in (9). These last forms have been removed from the study.

(9)   a. llam-a-tivo
            call-ThV-ivo 'shocking'
        b. aprens-ivo
            learn-ivo 'squeamish'

2.2 Telicity
Let us move now to some properties of the verbal base. As it is abundantly clear from the literature (cf. Vendler 1957, Dowty 1979, Verkuyl 1993, Krifka 1989, Bertinetto 2001, Borer 2005, Ramchand 2008, Husband 2010) the four traditional Aktionsart classes can be divided in two groups depending on whether there is a natural endpoint – that is, on whether the eventuality reported reaches a certain level of completion after which a continuation has to be interpreted as a second distinct instance of the eventuality–. Telic verbs are those with a natural endpoint and which do not satisfy the (non-strict) sub-interval condition (Smith 1991): the same description does not properly

hold of any random subinterval we select, because any interval that includes the endpoint will have a different denotation (the culmination of the eventuality); atelic verbs are those that satisfy the sub-interval condition. If you walk from 5 to 6, any interval down to a certain level of granularity, even one that includes the last second of your walk, would be characterised homogeneously as a walking situation, but if you wrote a letter from 5 to 6, only the intervals that contain the last moment will truthfully correspond to a 'writing a letter' event. States and activities are atelic, while accomplishments and achievements are telic.

There are different tests to diagnose telicity. Here we will use the following three:

(a) Combination with *acabar de* 'stop + gerund'. Only telics can combine with this expression:

(10) a. #Juan acabó de andar.
             Juan finished of walk *'Juan finished walking'
             [Ungrammatical unless in the context we infer a particular measure Juan
               Had decided to walk that day]
       b. Juan acabó de ver la película.
             Juan finished of watch the movie, 'Juan finished watching the movie'

The problem with this test is that it presupposes some duration in the event, and thus it does not sound natural with instantaneous achievements (Piñón 1997). For this reason we will complement it with a second test.

(11) *Juan acabó de llegar.
          Juan finished of arrive, *'Juan finished arriving'

(b) The interpretation of *for*-time expressions and *in*-time expressions. A *for*-time expression with telics gives rise to the imperfective paradox (Lascarides 1991), and as such it entails that the event was not completed during that period of time.

(12)   a.   John wrote the letter for an hour.
         b.   John walked for an hour.

(c) Combination with completion adverbs like *totalmente* 'totally', *del todo* 'completely'. As only telic predicates reach a completion point, only they can be combined with these adverbs.

(13)   a.   Juan escribió del todo la carta.
                Juan wrote of-the whole the letter, 'Juan wrote the letter to its end'
         b.   *Juan caminó del todo.
                Juan walked of-the all, *'Juan walked completely'

2.3 Open and closed scales

Boundedness, the notion that underlies telicity, has also been identified in the adjectival domain, specifically in the internal properties of the scale that a gradable adjective denotes. Kennedy & McNally (2005) have noted that there are two classes of adjectives: absolute and relative. Absolute adjectives are those whose scale contains a maximal and / or a minimal bounded value, while relative adjectives are those whose scale is open in the sense that there is no grammatically specified highest or lowest point on the scale. Absolute adjectives are represented in (14). (14a) is an example of an adjective bounded in its lowest point: a minimal value of dirt is enough to call something *dirty*. (14b) is an example of one bounded in its highest point: in order to say that something is clean, we must have the highest value of cleanness; (14c) is an example of an adjective with both a minimal and a maximal value: there is a maximal possible level of drunkenness, but also a minimal one (sobriety).

(14)   a.   sucio 'dirty'
         b.   limpio 'clean'
         c.   borracho 'drunk'

Relative adjectives are the most frequent group: *alto* 'tall', *gordo* 'fat', *fácil* 'easy', etc.

There are several tests to differentiate them: with completely closed adjectives and upper closed adjectives (those that are bounded at a highest value) it is possible to combine the adjective with the adverb *completamente* 'completely', which cannot combine with relative adjectives or those that are closed only at the lowest point. This is due to the absence of a scalar boundary that allows the speaker to evaluate when the scale has been completely covered.

(15) a. completamente {borracho / limpio}
          completely   drunk / clean
      b. *completamente {alto / fácil}
          completely   tall / easy

3   The correlation between aspect and scales

We are now in a position to state our hypothesis and present the results. If the idea that boundedness is a cross-categorial notion that can be instantiated as aspect or scalar structure is right, what we expect is that atelic verbs will get translated into adjectives which, at least, lack a boundary at the maximal point of the scale. For the same reason, *ceteris paribus*, a verb that has a culmination point should get translated into an adjective with a boundary that acts as the highest point in the scale. That is: we expect that the boundedness value will remain unchanged and the category change will simply instantiate it as aspect or as a scale. The following schema is intended as a graphic illustration of why the paralellism is expected to hold: the culmination point in the event would be equivalent, geometrically, to the highest possible value of a scale inside a property. Both are points after which any value would have to count as a distinct event or property.

(16) a. Event: -----+++++++++++++++++++Culmination point-------
      b. Scale: -----+++++++++++++++++++Maximal degree---------

In direct terms, what we expect is the following:

(17)   if a verb passes the tests for telicity, then its derived adjective in *-ivo* will be compatible with modifiers that identify the maximal point in the scale, like *completely*

We need, though, to clarify something about the readings of *completamente* 'completely'. Kennedy & McNally (2010) identify two, illustrated here as the two possible interpretations of (18).

(18)   El cielo estaba completamente azul.
        the sky was completely blue
        'The sky was completely blue'

The first one, which is the relevant one for our study, is the (qualitative) degree reading: the value of blue displayed by the sky was the maximum conceivable, that is, blue had arrived to the highest point of its scale. There is a second reading, which is not relevant for our study, which we refer to as the extension reading: every part of the physical extension of the sky was covered in blue (perhaps even pale blue), without clouds. In our analysis, this second reading should be discarded for judgements: its conditions of use do not depend on the properties of the adjectival scale, but rather on the referential nature of the noun that the adjective modifies. *Completamente blando* 'completely soft' is accepted in Spanish despite the fact that *blando* 'soft' does not denote a closed scale; however, it is only accepted in an extension reading, when the noun can be understood as a collection of parts or sequence of areas, in order to say that all parts of that object, without exception, are soft: thus, *El pavo está completamente blando* 'The turkey is completely soft' but not *#Esta persona es completamente blanda* 'This person is completely soft = lenient'.

But we have identified at least two other readings. The first one is typical with relational adjectives, and we will call it the exclusively-reading: the subject only has a relevant relation with the notion denoted by the adjective, and there are no other

relations with other notions. This reading can be obtained with most adjectives in *-ivo*, but again, must be discarded from our data, because it does not make reference to a highest point on a scale: it simply designates that the adjective mentioned can exhaustively identify the noun in the universe of discourse.

(19)   Este problema es completamente político (no económico).
           this problem is completely political (not economic)
        'This problem is completely / exclusively political, not economic'

The last reading is the result-completion reading, and it is interesting in itself, but again not relevant for our purposes, for different reasons: these are the cases where the adverb entails that the effect of the action denoted by the adjective can have a result that is achieved in full. This reading is restricted to the adjectives coming from verbs that, alone, allow for *completamente* as a result state modifier (20) –thus, a subclass of telic predicates that grammatically specify a result following the culmination point, such as *break*–.

(20)   a.   Este bálsamo   me   curó   completamente.
                 this balsam   me   healed completely
              'This balsam healed me completely'
        b.   un bálsamo   completamente   curativo
                 a balsam   completely   healing
              'a balsam that heals fully'

The reason why this reading has to be discarded for our purposes is that in it the adverb is still modifying the internal aspectual structure of the base verb, not the scale structure of the adjective. Thus, this reading (interesting as it is) is irrelevant for the question of whether aspect gets translated into scalar structure or not.

    There is also a methodological observation that should be mentioned. The first has to do with the use of corpora made in this work. There are surprisingly few attested cases of "*completamente* + adjective in *-ivo*" in the available electronic corpora. For

instance, in *CREA, Corpus de Referencia del Español Actual* (RAE's contemporary Spanish corpus, with around 350 million forms) there were only 6 cases of the sequence "*completamente *ativo*", that would take all cases of masculine singular adjective in -*ivo* coming from verbs of the first conjugation. Moreover, 3 of them where sequences of *completamente negativo*, 'completely negative'. This lack of attested cases convinced us that, in order to find out the grammatical combinations, native speaker intuitions had to be used, through a questionnaire where speakers (15) had to mark those combinations that they deemed acceptable. Follow up questions were presented to check that the interpretation of *completamente* was the one we were looking for. In contrast, with all the rejected combinations, we additionally checked in the available corpora –*CREA* and *Corpus del Español*– to see if there were any occurrences. The reported data, then, are coming almost exclusively from native speaker intuitions (the author's, linguists' and non linguists') in the case of what is possible, and combine corpora searches and native intuitions in the case of the ungrammatical sequences.

3.1 Atelic verbs

The hypothesis that we will put to test is, then, that there is some correlation between the aspectual value of the base verb and the scale properties of the adjective. This hypothesis seems to be at least initially confirmed. The following adjectives come from atelic verbs; these verbs are atelic and in fact cannot be turned into telic verbs through the properties of its direct object (unlike incremental theme verbs, Krifka 1989). They include both states and activities. As can be seen, they are unattested with *completamente* 'completely' in corpora and rejected in the relevant reading by native speakers (15 subjects).

(21)   a. *completamente pensativo
           completely thoughtful ('think')
       b. *completamente meditativo
           completely meditative ('meditate')
       c. *completamente conductivo
           completely transporting ('conduct')

   d. *completamente considerativo
      completely considerative ('consider')
   e. *completamente contemplativo
      completely contemplative ('contemplate')
   f. *completamente cooperativo
      completely cooperative ('cooperate')
   g. *completamente directivo
      completely directive ('direct')
   h. *completamente dormitivo
      completely domitive (*dormir* 'sleep')
   i. *completamente exagerativo
      completely exaggeratory ('exaggerate')
   j. *completamente legislativo
      completely legislative ('legislate')
   k. *completamente ponderativo
      completely hyperbolical (*ponderar*, 'exaggerate')
   l. *completamente rogativo
      completely supplicatory (*rogar* 'supplicate')
   m. *completamente rotativo
      completely revolving (*rotar*, 'revolve')
   n. *completamente abusivo
      completely abusive ('abuse')
   o. *completamente posesivo
      completely possessive ('possess')

In this list, we have stative verbs like *possess*, activities like *revolve*, *abuse* or *conduct*, verbs which are vague between a state and an activity (*think*; cf. Dowty 1979) and some examples of the class of non-dynamic activities that Maienborn (2003) has called Davidsonian-states (*sleep*). What they all have in common is that the base verb is atelic and that the adjective does not define an upper-closed scale. Our contention is that these

two properties are related: the adjective does not define an upper-closed scale precisely because the base verb does not contain a culmination event point.

3.2 Telic verbs

The following adjectives, on the other hand, come from telic verbs, and accept *completamente* 'completely' in the relevant qualitative degree reading that has been mentioned.
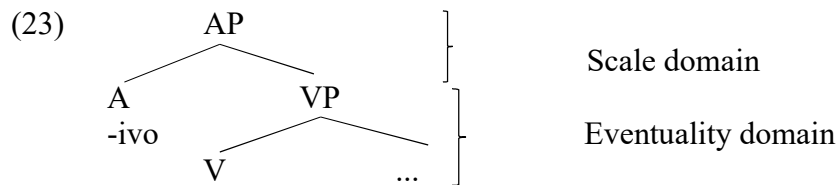
(22) a. completamente explicativo
        completely explanatory (*explicar*, 'explain')
      b. completamente digestivo
        completely digestive (*digerir*, 'digest')
      c. completamente optativo
        completely optional (*optar*, 'choose')
      d. completamente justificativo
        completely justifying (*justificar*, 'justify')
      e. completamente limitativo
        completely restrictive (*limitar*, 'restrict')
      f. completamente privativo
         completely privative (*privar*, 'deprive')
      g. completamente constructivo
         completely constructive ('construct')
      h. completamente sanativo
        completely healing (*sanar*, 'heal')
      i. completamente ulcerativo
        completely ulcer-causing (*ulcerar*, 'cause an ulcer')
      j. completamente vengativo
         completely vengeful (*vengarse*, 'avenge')
      k. completamente adhesivo
        completely adhesive (*adherirse*, 'stick, hold')
      l. completamente abrasivo

completely abrasive (*abrasar*, 'burn')
  m. completamente conclusivo
    completely conclusive (*concluir*, 'close')
  n. completamente subversivo
    completely subversive (*subvertir*, 'subvert')

Here, again, we find a variety of verbs which have in common that they are telic: some of them define a result state (*stick, heal, cause an ulcer*), and some of them reach a limit but do not define a subsequent result (*explain, choose*). They define scales with an upper boundary, and again, our claim is that this is not by chance. In these adjectives, the base verb, through its lexical aspect, is defining a culmination point, and the adjectival affix translates it into a scale structure.

3.3 Theoretical consequences

Schematically, and simplifying a lot, we would have the situation in (23):

(23)

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            AP ─┐
          /    \     }  Scale domain
        A       VP ─┐
        -ivo   /  \    ⎬  Eventuality domain
              V   ... ─┘
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Scale domain

Eventuality domain

The adjectival suffix can be seen, then, as a transitioner that maps an entity from the domain of eventualities into the domain of scales and properties. This idea is not new, of course: see Beard's (1995) notion of transposition. One way to evaluate the theoretical implications of this article is in fact to view it as an exploration of the conditions under which transposition redefines the domain where a concept is evaluated.

Adopting a view of category change as a change of domain allows us to define a deverbal adjectiviser as follows:

(24)   f(eventuality)=scale

If this is the case, that is, if deverbal adjectivisers translate the information carried by the base into a notion that can be interpreted in a non-temporal domain, then we expect precisely the situation that we are finding here. Ceteris paribus, the adjectiviser would not add any new information, and consequently the properties of a scale thus defined will depend on the set of notions introduced by the base verb. This, of course, does not block automatically the possibility that some deverbal adjectivisers are more semantically rich and do not simply translate these notions; they might also define already some properties of the scale, and the base verb will have to be coerced in a way that fits these properties.

We expect, then, to have two classes of deverbal adjectivisers, and *-ivo* is a representative of the first class:

(25)   a. Transparent adjectivisers: these limit themselves to translate eventualities into scales.
b. Scale adjectivisers: these contain already information about the scale they define and coerce the base verb into that scale.

A property that we expect should be germane to these two classes of adjectivisers is whether they impose aspectual constraints to the base verb. *-ivo*, as we have seen, does not select verbs according to their Aktionsart: it is combined with states, activities, accomplishments and achievements. This is expected if the adjective is semantically impoverished and does not define any scalar property by itself; then its job would be only to translate eventualities into scales, and the resulting scale will be a reflection of the Aktionsart of the base.

In contrast, the affix *-nte* '-ant', which is used to build agentive nouns and adjectives from verbs in Spanish, is a plausible candidate for the second class: an affix that already defines part of the scalar properties. As noted in several works (Cano 2013, Fábregas & Marín 2014), Spanish *-nte* only selects atelic verbs, states or activities.

(26) a. pensa-nte
       think-nt 'thinking'
    b. existe-nte
       exist-nt 'existing'
    c. *asesina-nte
       murder-nt. Intended: 'murdering'

This is expected if the affix already carries scalar meaning, specifically that it builds an open scale. The two consequences that we would expect from this hypothesis in our theory are the following: first, any adjective in *-nte* would have to reject *completamente* 'completely', because the scale lacks an upper boundary; secondly, the affix will have to coerce a telic base into an atelic reading, and moreover, the resulting adjective will be open scaled. Both predictions are confirmed. When *-nte* builds an adjective from a verb that is ambiguous between an achievement and a state (27), the reading that is selected is the stative one:
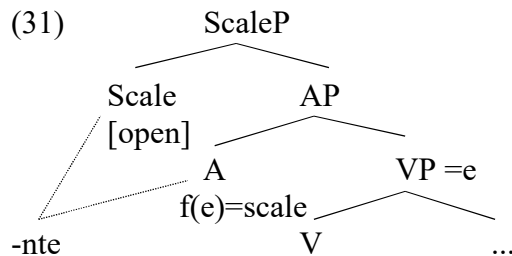
(27) a.   Juan descendió (achievement).
          Juan descended
          'Juan went down'
    b.   El camino   desciende (state)
          the road   descends
          'The road is oriented downwards'
(28) a.   *un chico descendente
          a   boy   descending
          Intended: 'a boy that descends'
    b.   un camino descendente
          a   road   descending
          'a road oriented downwards'

In other cases, the base verb –that alone expresses a change of state– is coerced into an ability / dispositional reading, where it is stated that the object has the capacity, or potential, to produce that change; again, this is an atelic reading.

(29)   un objeto corta-nte
        an object cutt-ing
        'an object that can cut'

Thus, independently of whether the base verb is telic or atelic, this affix coerces it into an atelic reading and the resulting adjective has an open scale (30). These properties are explained together if -*nte*, unlike -*ivo*, already projects an open scale (31).

(30)   a. (*completamente) corta-nte
            completely   cutt-ing
        b. (*completamente) pensa-nte
            completely   think-ing

(31)   ScaleP
            Scale   AP
            [open]
                    A   VP =e
                 f(e)=scale
        -nte   V
                                 ...

3.4 *Verbs with two or more aspectual values*

An observation is in order about verbs that have different aspectual values that alternate. Take as an example the verb *decorar* 'decorate'. This verb (cf. for instance Rothmayr 2009) can be used as a telic verb, denoting an accomplishment (32a), or as an atelic predicate, specifically a state that denotes that for a while a subject holds a particular function (32b).

(32)   a. Juan decoró el árbol de Navidad.
          Juan decorated the tree of Christmas 'Juan decorated the Christmas tree'
       b. Las velas decoran el árbol de Navidad.
           the candles decorate the tree of Christmas
          'The candles decorate the Christmas tree'

However, only the stative meaning is preserved in the adjective. We know this because the subject of predication is restricted to entities that can be used as decoration, not that control a decoration event.

(33)   {un sombrero / #un niño} decorativo
         a hat / a child decorative
       'a decorative hat; #a decorative child'

The expectation is, then, that the adjective is built over whatever structure accompanies the stative reading of the verb, and thus the adjective should be relative. (This prediction is, by the way, confirmed, cf. 34). In short: whenever the predicate has two aspectual uses, the group where it has been classified is the one that matches the interpretation preserved inside the adjective.

(34)   (*completamente) decorativo
          completely   decorative

4   Counterexamples

At least as interesting as the expected cases are the (relatively few) cases where there are some mismatches, as this will inform us about what else happens in the derivation in terms of meaning manipulation.

4.1 Atelic > upper closed scale

There are not many cases of atelic bases that give rise to upper-closed scales, but (35) shows two examples:

(35) a.   completamente admirativo
              completely   admirative
              'completely full of admiration'
       b.   completamente menospreciativo
              completely   contemptful

The verbs *admirar* 'admire' and *menospreciar* 'despise' are atelic, and yet the corresponding adjectives have upper closed scales, as witnessed by their acceptance of *completely*. However, they have other strange properties. We already noted that –ivo typically gives rise to two readings: an active and a passive one. None of them applies properly to these cases. *Admirativo* 'admirative' does not mean 'that admires' or 'that is admired', but rather has an instrumental meaning: it refers to an entity that is used to manifest admiration.

(36)   un discurso admirativo
        a   speech   admirative
       'a speech full of admiration'

Similarly, *menospreciativo* 'contemptful' refers to entities that manifest scorn or contempt, not to someone that despises or something that is despised. We suggest that this particularity of its meaning is what lies behind the mismatch between aspect and scale: the crucial property is that the adjective refers to entities that in a certain point in time are used to manifest a feeling, and while the feeling is an unbounded situation, the act whereby that feeling is expressed is bounded, because it is a manifestation of a mental state through a behaviour. In other words: the instrumental use of these adjectives, as means to express a feeling, involve the telicisation of the state. Obviously, the question that emerges at this point is at what level of grammar such semantic

operation takes place, whether it should be represented structurally, and if so, how, but we leave these questions outside this article. What is crucial for our purposes is to show that these adjectives have 'something else' reflected in their meaning, and that there is a plausible connection between the extra semantic notion and the unexpected scalar behaviour they display.

4.2 Telics > upper open scale
There are also some telic verbs that produce upper-open scales:

(37) a. *completamente   abortivo
            completely   abortive
      b. *completamente   perceptivo
            completely   perceptive
      c. *completamente   adoptivo
            completely   adoptive
      d. *completamente   recordativo (from *recordar*, 'remind')
            completely   reminding
      e. *completamente   receptivo
            completely   receptive

These verbs have something in common that can also explain the mismatch: they express punctual events that do not allow for partial completion, and do not denote a process that takes place little by little. Several tests show this; for instance, they don't allow modification with *a medias* 'halfway' in the meaning that the event did not arrive to its culmination, but got started. In this sense, they are punctual achievements, all-or-nothing changes.

(38) a. *María   abortó   a medias.
           María   aborted   at half '*María aborted halfway'
      b. *María adoptó   a   su hijo   un poco.
           María adopted   ACC   her son   a bit

     c. *María recibió   el paquete   un poco.
       María received   the package   a bit

This is plausibly connected to the rejection of *completamente*: this adverb requires, in order to be used felicitously, that there is at least the possibility of performing the eventuality in an incomplete manner, but these telic verbs express situations where there is no dynamic path that is followed incrementally until a culmination. The change either happens or it does not even start, but cannot be started and interrupted. The expectation is that they would be translated into scales with only two values: yes and no. There is an upper point ('yes'), but it is at the same time the lowest point and therefore *completamente* is not grammatical with it.

5   Conclusions

This preliminary study of the relation between aspect and scales has produced some promising results: there are relations that support the idea that scales and aspect are the instatiations of the same set of primitives, respectively, embodied in an adjectival or a verbal domain. We have also seen preliminary evidence that some affixes behave in a classical transpositional way, purely translating the primitives from one domain to another without predefining any further properties, while others do not simply translate across domains, but also impose conditions on the kind of structure that will be projected. We have also seen that there are counterexamples that, after further examination, show special properties that could plausibly be expected to interact with how the scale or the event are defined. If this research is on the right track, it could set a baseline to start asking new questions about the relation between lexical categories: what is the nature of the primitives that get translated cross-categorially? Are they lexical, semantic, syntactic...? What is the appropriate definition of each domain? Where do these domains come from, general cognition or UG? We hope to have been able to, at least, convince the reader that we already have the theoretical machinery to start asking these questions, and that morphological word formation can be a window into it.

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