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On Intensifiers and Categorial Shift: The Case of Temperature Terms in Italian

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Abstract:

In this squib, we consider the issue of categorization applied to temperature terms, specifically targeting the use of nominal elements as intensifiers in a series of morphosyntactic contexts in Italian. We show that a set of (light) nouns can be used as evaluative classifiers, and that – at the same time – they can trigger a nominal value for the (adjectival) items they modify. We demonstrate that we have two options to operate a quantification over a predicative adjectival root: degree modification via quantification/gradation or intensification via evaluative “light nouns” or adjectival items providing a category (individuating) shift. We provide a model based on the theoretical insights of Savoia *et al.* (2017) for the lexical items introduced in the discussion.

Keywords: *Adjective, Evaluative, Intensifier, Noun, Temperature Term*

1. On “basic” temperature terms in Italian and their modifiers: an overview

In this brief note, we deal with the issue of categorization applied to temperature terms¹ targeting the use of nominal elements as intensifiers in a series of morphosyntactic contexts in Italian. In particular, we show that a set of nouns can be used as evaluative (augmentative/pejorative classifiers), and that – at the same time – they can trigger a nominal value for the (adjectival) items they modify.

Our main aim is to show that we have two options to operate a quantification over a predicative adjectival root expressing a basic temperature value: intensification via the superlative or degree modifiers or modification via evaluative “light nouns”

¹ Plank (2003) argues that “for distinguishing perceptions/experiences of ‘temperature’, human languages tend to have basic terms”. Indeed, all natural languages tend to organize their temperature terminology with reference to two distinct basic items, ‘hot’ *vs.* ‘cold’ (cf. Koptjevskaja-Tamm 2011; Luraghi 2015).

class items/adjectives providing a category shift, namely turning the adjectival base into a noun. We will provide some empirical evidence for such a claim.

Let's start considering the categorial nature of the “basic” terms (i.e. *hot/cold*) expressing perceptions/experiences of temperature in Italian, starting from the examples in (1).

- (1) a. Fa/è caldo
do. 3SG.PRS/be. 3SG.PRS hot
'it's hot'
- b. Fa/è freddo
do. 3SG.PRS/be. 3SG.PRS cold
'it's cold'

As shown by Luraghi (2015), ambient temperature is linguistically encoded by impersonal verbs in Italian, akin to meteorologic predicates. Consider the examples in (2).

- (2) a. Piove/ nevica/ grandina ecc.
rain. 3SG.PRS snow. 3SG.PRS hail. 3SG.PRS
'It rains, it snows, it hails'

The difference between (1) and (2) is that there are no specific lexical items in Italian to encode temperature predicates, so in (1) the light verbs *fare* (do) or *essere* (be) are involved in a periphrastic structure in the third person singular with an obligatory null subject. In other words, 'hot' and 'cold' in (1) act as predicates, with the verbs 'do' or 'be' only operating as a support.

The first issue that interests us addressing this kind of temperature predicates is the categorial status of items like *caldo* (hot) or *freddo* (cold) in the periphrastic structures in (1). A first possibility is that they are nominal items introduced as (internal) arguments in the structure. Actually, roughly following Hale and Keyser (1993, 2002) L-Syntax paradigm, meteorologic verbs are taken to be derived from the incorporation of a nominal root into an abstract verbalizing head.² Based on this assumption, one may argue that while standard meteorologic predicates in Italian undergo a process of *conflation*, with items expressing perceptions/experiences of temperature the verbal head is not empty and it is realized by the (light) verbs *do/be*.

Notwithstanding, this solution is undermined by an empirical issue. In order to say that the perceived temperature is *very cold* or *very hot*, it is possible to use the degree modifier 'molto' *very* or the morpheme *-issimo* which is the Italian superlative and attaches (almost) only to adjectival items.³ In this regard, consider the data in (3), and compare it to the adjectival predicates in (4), modified by the same degree items/superlative. For this reason, it seems implausible to assume that *caldo* or *freddo*, in these contexts, are nominal (or a-categorial) arguments selected by a “dummy” verb.

² For meteorologic predicates, Hale and Keyser maintain the standard assumption that the element that is merged in the complement position of the verb is an (internal) argument. The verb-complement configuration could imply that meteorologic verbs have an external argument *akin* to unergatives like *laugh* or *sleep*. Hale and Keyser are aware of the problem that arises from the presence of an expletive at surface structure in *precipitation* structures, suggesting two possible solutions: the subject of meteorologic verbs is a true subject selected by the verb, or the subject position is empty; thus, meteorologic *predicates* would be unaccusative predicates. We are not interested here in considering this issue in details. The interested reader may consider the recent survey and the theoretical proposal for “precipitation predicates” put forth in Álvarez López (2021).

³ Very few nouns take the superlative *-issimo* in Italian. They include *campionissimo* 'greatest champion', *governissimo* 'super government', *occasioneissima* 'big occasion'. These forms seem to be unproductive artefacts of the language of newspapers.

- (3) a. fa/è molto caldo / freddo
do.3SG.PRS /be.3SG.PRS very hot cold
'It is very hot, cold'
- b. fa/è caldissimo / freddissimo
do.3SG.PRS /be.3SG.PRS hot.SUP / cold.SUP
'It is very hot, cold'
- (4) a. è molto bello/brutto
be.3SG.PRS very beautiful/ugly
'It is very beautiful, ugly'
- b. è bellissimo/bruttissimo
be.3SG.PRS beautiful.SUP /ugly.SUP
'It is very beautiful, ugly'

Thus, we argue that the solution which appear to be empirically adequate is to consider that temperature items like *caldo* and *freddo* are adjectives when they are used to encode ambient temperature predicates. Here, temperature terms are non-referential as prototypical adjectives, and clearly do not behave as prototypical nouns.⁴ Otherwise, it would be impossible for them to select for degree modifiers or for the superlative *-issimo*: the scope of this intensifier includes adjectival predicates, usually leaving out nominal roots in Italian (cf. Savoia *et al.* 2017).

At this point, we must consider that it is still possible to express items encoding perceptions/experiences of ambient temperature by means of a nominal item in Italian. This happens, for instance, when a “noun in disguise” enter the syntactic derivation as an intensifier of sort.

Consider the examples in (5).⁵

- (5) a. È/Fa un freddo cane
be.3SG.PRS /do.3SG.PRS a cold dog
'It is very cold' lit. *It is a dog cold*
- b. È/Fa un caldo boia
be.3SG.PRS /do.3SG.PRS a hot hangman
'It is very hot' lit. *It is a hangman hot*

The lexical items *boia* ‘hangman’ or *cane* ‘dog’ in (5), which encode nominal referents, pragmatically express a modifying value similar to the intensifier *-issimo* or the degree modifier *molto* (very). The interesting fact is that the presence of these nominal modifiers obligatorily triggers a category shift for the non-verbal item involved in the predicate of temperature. This is confirmed by the compulsory presence of the indefinite determiner *un* within the derivation, as shown by the ungrammatical sentences in (6).

⁴ Notice that *caldo* and *freddo* can be introduced as referential subjects, as represented in (i). It is clear that in these cases, they behave like canonical nouns.

(i) Il freddo di questi giorni ha distrutto le coltivazioni
'the cold of these days has destroyed the crops'

⁵ An anonymous reviewer finds the form *essere* + temperature term quite marginal in her own Italian in the contexts represented in (5), accepting only *fare* + temperature term. Actually, we fully accept the *essere* variant. The grammaticality of the forms with *essere* is confirmed by the fact that we have retrieved a number of examples also in books/newspapers/blogs online (via a Google search). Just consider the example in (i).

(i) Fuori è un caldo boia. (Ugo Baldi, *Dietro lo scaffale*, La Nave di Teseo, 2022)
'It is very hot outside'

- (6) *fa freddo boia/*caldo cane
do.3SG.PRS cold hangman /hot dog

The insertion of a nominal intensifier makes ungrammatical the presence of either the superlative morpheme or the degree modifier *molto*, as represented in (7).

- (7) *fa (un) freddissimo boia
do.3SG.PRS a cold.SUP hangman
*fa (un) molto freddo boia
do.3SG.PRS a very cold hangman

The contemporary presence of the intensifier *molto* and the superlative *-issimo* is always banned with “bare” temperature terms, as usual for adjectives in Italian (cf. Savoia *et al.* 2017). Consider the data illustrated in (8). Notice also that the category change *adjective*>*noun* for temperature predicates is triggered also by a set of adjectival items operating again as intensifiers, as illustrated in (9).⁶

- (8) a. *è molto freddissimo/caldissimo
be.3SG.PRS very cold.SUP/hot.SUP
b. *è molto bellissimo/bruttissimo
be.3SG.PRS very beautiful.SUP/ugly.SUP
- (9) a. fa/è un caldo bollente/infernale
do.3SG.PRS /be.3SG.PRS a hot boiling/infernal
‘It is very hot’ lit. ‘(it) does a boiling/infernal hot’
a’. ??fa caldo bollente/rovente/infernale
b. fa/è un freddo polare/gelido
do.3SG.PRS /do.3SG.PRS a cold polar/icy
‘It is very cold’ lit. ‘(it) does a polar/icy cold’
b’. ??fa freddo polare/gelido

Interestingly, this is not an idiosyncrasy of impersonal predicates of temperature *akin* to meteorologic predicates: when temperature is linguistically encoded as a possessed personal feeling,⁷

⁶ Luraghi (2015) addresses the intermediate temperature terms *tiepido* ‘warm’ and *fresco* ‘cool’, and the extreme terms *bollente* ‘very hot’ and *gelato/gelido* ‘icy-cold’, which we will not consider in the present paper given that they cannot be normally used in the predicative frames which are of interest here (cf. *fa bollente/*fa gelido). Just note that the ‘extremes’ *bollente* and *gelido* can act as modifiers for the basic temperature terms *caldo* and *freddo* in the examples in (9).

⁷ An anonymous reviewer notice that the same pattern is replicated in existential contexts, which actually seems to express (locate) that the temperature predicate is linked via the clitic *ci* to a specific locative/temporal *source*. Consider the examples in (i).

- (i) a. C’è caldo/freddo.
‘there is hot/cold’
b. C’è un caldo/freddo boia/cane
‘there is very hot/cold’
c. C’è molto caldo/freddo.
‘there is very hot/cold’
d. C’è freddissimo/caldissimo.
‘there is very hot/cold’

As for the case of possessed personal feelings expressed with the *have* predicate (cf. the examples in (10)), it is

we find the same pattern, in which the temperature item can be turned into a noun when modified by a set of noun/adjective intensifiers. See the data in (10).⁸

- (10) a. Gianni ha freddo
Gianni have.3SG.PRS cold
'Gianni feels cold'
- b. Gianni ha molto freddo
Gianni have.3SG.PRS very cold
'Gianni feels very cold'
- c. Gianni ha freddissimo
Gianni have.3SG.PRS cold.SUP
'Gianni feels very cold'
- d. Gianni ha un freddo boia
Gianni have.3SG.PRS a cold hangman
'Gianni feels very cold' lit. 'Gianni has a hangman cold'
- e. Gianni ha un freddo terribile
Gianni have.3SG.PRS a cold terrible
'Gianni feels very cold' lit. 'Gianni has a terrible cold'

As noted by Luraghi (2015: 340-341), the syntax of “possessed” temperature mimics that of other bodily (or psychological) sensations, as in (11).

- (11) a. Gianni ha sete
Gianni have.3SG.PRS thirst
'Gianni is thirsty'
- b. Gianni ha fame
Gianni have.3SG.PRS hunger
'Gianni is hungry'
- c. Gianni ha paura (di Maria)
Gianni have.3SG.PRS fear of Mary
'Gianni is afraid (of Maria)'

In such contexts, the lexical items involved appear to have characteristics similar to the ones of temperature terms. They are non-referential and appear to be nearer to predicative adjectives than to nouns, being able to take the superlative morpheme *-issim-*.⁹ See the data in (12b).

interesting to notice that canonical adjectives cannot appear in these contexts (cf. *è bello* ‘it is beautiful’ vs. **c'è bello* ‘there is beautiful’/**ha bello* ‘s/he has beautiful’).

⁸ We do not consider here tactile temperature which is typically expressed via attributive or predicative constructions. With tactile experience, temperature terms work as adjectives and cannot become nominal items (cf. Luraghi 2015, from which the following examples are taken):

- (i) a. La pietra è fresca/fredda/gelata/tiepida/calda/bollente.
the stone be.3SG cool/cold/ice-cold/warm/hot/boiling
'the stone is (feels) cool/cold/very cold/warm/hot/very hot.'
- b. *la pietra è un freddo boia/calda cane
- (ii) una bevanda fresca /fredda/gelata/tiepida/calda/bollente
a drink cool/cold/ice-cold/warm/hot/boiling
'a cool/cold/very cold/warm/hot/very hot drink'

⁹ Similar consideration can be applied to the (adverbial) items *bene* and *male* in various contexts. As for bodily/psychological sensations, consider the examples in (i).

- (12) a. Gianni ha molta/*molto sete/fame/paura
 Gianni have. 3SG.PRS much.F/much.M thirst.F/hunger.F/fear.F
 ‘Gianni is very thirsty/hungry/afraid’
- b. Gianni ha setissima/famissima/paurissima
 Gianni have. 3SG.PRS thirst.SUP/hunger.SUP /fear.SUP
 ‘Gianni is very thirsty/hungry/afraid’

The terms in (12) can be again turned to nouns with the presence of nominal or adjectival intensifiers, as shown again by the obligatory presence of the indefinite determiner in (13).

- (13) a. Gianni ha *(una) sete boia
 Gianni have. 3SG.PRS a thirst hangman
 ‘Gianni is very thirsty’
- b. Gianni ha *(una) sete terribile
 Gianni have. 3SG.PRS a thirst terrible
 ‘Gianni is very thirsty’

Quite interestingly, while the degree modifiers agree with the head in (12a), pointing to a hybrid nature (somewhat at the interface adjectives and nouns) of the items for *hunger* or *thirst* in Italian, there are some lexical items which are usually selected from the lexicon as nominal items that cannot agree with degree modifiers and can take superlatives when they appear in predicative contexts quite similar to the ones discussed above.

Consider the case of *amica* (female friend) in (14), where the degree modifier *molto* fails to agree with the head and the application of superlative morphology give grammatical results, *contra* what happens in referential contexts (cf. 14d,e).

- (14) a. Maria è amica di Gianni
 Maria is friend.F of Gianni
 ‘Maria is a friend of Gianni’
- b. Maria è molto/*molta amica di Gianni
 Maria is very.M/very.F friend.F of Gianni
 ‘Maria is a very good friend of Gianni’
- c. Maria è amicissima di Gianni
 Maria is friend.SUP.F of Gianni
 ‘Maria is a very good friend of Gianni’
- d. *L’ amicissima di Gianni é partita
 the friend.SUP.F of Gianni is left

- (i) a. il dente mi fa male/molto male/malissimo
 ‘my tooth hurts (very bad)’
- b. bere té verde fa bene/molto bene/benissimo
 ‘drinking green tea is (very) good’

Furthermore, *male* in Italian can be modified by an item like *cane* ‘dog’, in order to convey intensification. Interestingly, in this context the indefinite determiner *un* must be present pointing again to a process of “nominalization” triggered by the modifier. Consider the examples in (ii).

- (ii) a. il dente mi fa *(un) male cane
 ‘my tooth hurts (very bad)’

- e. l' amica di Gianni è partita
 the friend.F of Gianni is left
 'The friend of Gianni left'

At this point, we have a quite comprehensive picture of the behavior of the non-verbal part of a predicate involving perceived or possessed temperature (and possibly, bodily sensation, psychological feelings, etc.): it is selected from the lexicon as an adjectival predicate and can be turned into a nominal item when a set of nouns or adjectives enter the derivation as intensifiers. The mechanism of intensification can be also (independently) performed by the superlative morpheme *-issimo* or by degree quantifiers without changing the categorial base of the (adjectival) predicate.

The theoretical questions triggered by these data are, at least, how the categorial shift is performed and what is the status of the nominal intensifiers which happen to behave quite like the adjectives in the examples above?

We also think that the present data are interesting in the light of recent minimalist formalization of adjectival modification made by Manzini (2021), based on recent insight by Chomsky (2020). On adnominal modifiers, Chomsky, introducing the relevance of the operation Pair-Merge in the syntax and targeting the an expression like “young man” assumes that

there's an asymmetry between the two words, that's clear. The element that's formed is a noun phrase, not an adjective phrase. So *young* is an adjunct that's not changing the category [...] it seems we need an operation Pair-Merge, which will also apply to the simple adjunct case like *young man* [...] for the purposes of labeling – or more generally of projecting the structure, *young* will be adjoined to *man*, but you don't see it in the labeling because it's off in some other dimension. (2020: 49-52)

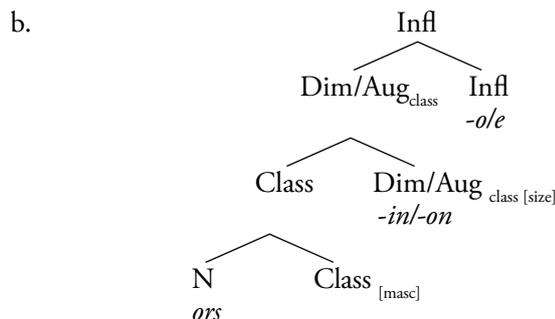
The issue here is precisely that, in some cases, modification seems to be able to trigger a categorial shift and, thus, re-labeling. One possibility to overcome this issue is to admit that roots are category-less (Marantz 1997, 2007) and that they are categorized by linking to *n*, *v*, *a*, etc.. From this perspective, one may say that items like *caldo* or *freddo* are selected from the lexicon without a category and are freely adjoined to an adjectivizer or a nominalizer. Still, we think that this would be an *ad hoc* solution (cf. e.g. Franco *et al.* 2020 on collectivizers in Italian). *Hot* and *cold* in their basic occurrence as ambient temperature/perceived temperature predicates appear to be non-referential and adjectival in nature, given the empirical evidence provided above.

In what follows, we will sketch a possible model able to account for the process of intensification/evaluation of an adjectival root, based on the insight of Savoia *et al.* (2017). We will also show that, while Pair-Merge can account for “standard” modification, a canonical Set-Merge process is required to account for modification entailing a categorial shift of the head.

2. Nominal intensifiers as evaluative light nouns/classifiers: a theoretical interpretation

Following Savoia *et al.* (2017) we take evaluatives to usually express size properties or the grading of individuals/events/features with reference to physical or culturally-determined properties. They can be understood as predicates that contribute to restricting the argumental variable of a nominal root. A basic structure for “canonical” evaluatives in Italian is provided in (15) for the lexical item *orso* ‘bear’. The evaluative merges with the predicative nominal base combined with the (gender) class specification. In the representation in (15), the complex noun inherits the class gender from the root (a masculine evaluative form is realized in our example). The inflectional node ensures that the structure is visible for agree.

- (15) a. orsino/orsone
'small bear/big bear'



Diminutives/Augmentatives are to be construed as classifiers (i.e. DimClass/AugClass). Crucially, many recent works in the literature have highlighted the singulative nature of many instances of evaluative morphology. In particular, Savoia *et al.*, following Wiltchko (2006), Ott (2011), Déchaine *et al.* (2014), among others, have assumed that the diminutive suffixes in Italian corresponds to something as “a small/ little individual” to which the properties introduced by the root apply.

Given this singulative effect, diminutives are commonly able to change mass nouns and verbal predicates into count nouns (cf. also Mathieu 2012; Franco *et al.* 2020), as illustrated in (16) for Italian.

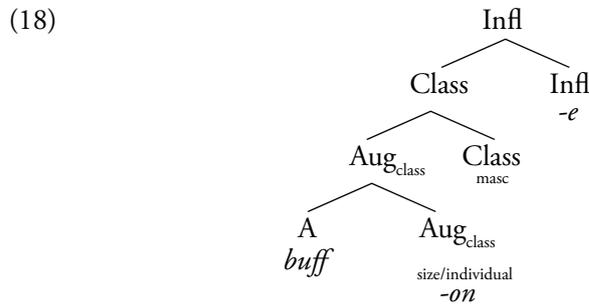
- (16) a. cera > cerino. *mass-individual*
wax wax match
b. imbiancare > imbianchino *deverbal*
'paint' painter

A “bare” singulative effect is not properly obtained with augmentative/pejorative morphemes, as shown in Savoia *et al.* (2017), Franco *et al.* (2020), given that derived forms with the augmentative *-on-* differ from the derived nouns formed by *-in-*, as in (16), in that *-on* normally specifies an excessive/habitual property (Grandi 2003). Consider the examples in (17), where *-one* applies to verbal, mass and adjectival bases.

- (17) a. mangiare > mangione, *deverbal*
'eat' 'big eater'
b. ciccia > ciccione *mass>individual*
'flesh' 'fat man'
c. buffo > buffone *deadjectival*
'funny' 'fool'

The deverbal diminutive in (16b) do not introduce a quantified interpretation of the event and in fact do not usually entail size interpretation. Still, as shown above, inserting either a diminutive or an augmentative on the verbal/adjectival root generates an individual interpretation, more precisely it specifies properties associated with an individual referent.

According to Savoia *et al.*, the individuating effect of diminutives/augmentatives is connected to the availability of a low position of such elements which act as classifiers, and Merge directly with the nominal, adjectival or verbal root. Specifically, the singulative effect is obtained by diminutive and augmentatives suffix both combining with events, qualities and mass roots, given that such predicates can be represented as aggregates of undifferentiated components or a continuum (Chierchia 2010): a temporal continuum of the event, the continuum of parts of a substance, etc. We assume that verbal or adjectival roots are devoid of gender, which is selected by the evaluative “class” morpheme itself. Consider the rough representation in (18), in which we sketch Savoia *et al.*’s model for “individuating” evaluatives. We specifically target the adjectival base in (17c).



To sum up, canonical evaluative suffixes introduce predicates/properties that contribute to restricting the argument of the nominal root. A second state of affairs emerges when the evaluative combines with verbal, mass or adjectival roots; in these contexts, they directly modify the properties of the root. Thus, we have two possible results: an intersective reading in which the evaluative behaves like a (size) adjective in a conjunction relation with the noun; a reading in which the evaluative introduces a size quantification and perform an individuating mechanism on the root. The evaluative classifier itself, in the latter case, selects for class gender (cf the representation in (18)).

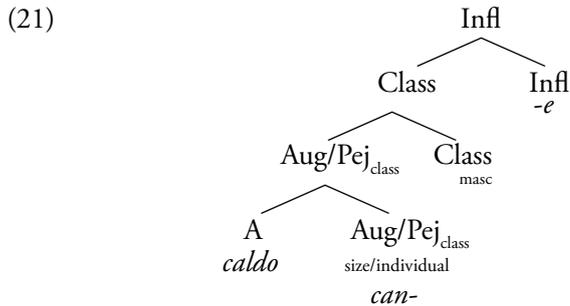
It is widely known that classifiers can be introduced in the grammar as light nouns. Jurafsky (1996; cf. also Wiltschko 2006) shows the crosslinguistic (and diachronic) association of the term for “child” and diminutive morphemes. In Italian, for instance, gender classification can be performed through (light) nouns. Just consider the case of (biological) gender light noun (*maschio*, male; *femmina*, female) classifiers applied to animal names in (19).

- (19) il puma maschio, la foca maschio, il canguro femmina, etc.
 ‘The male puma, the male seal, the female kangaroo’

We argue that the items in (5), namely *cane* ‘dog’ or *boia* ‘hangman’ modifying temperature terms, are evaluative “light noun” classifiers (devoid of their usual referential content) encoding an augmentative/pejorative value. Pragmatically, they trigger a (maximum) degree interpretation, similar to the one conveyed by the superlative. Actually, the set of nouns that can be recruited from the lexicon as evaluative class items able to modify temperature predicates can include the following terms:

- (20) fa un caldo cane/maiale/boia/assassino/bestia...
 do.3SG.PRS a hot dog/pig/hangman/killer/beast...
 ‘It is very hot’

Interestingly, all the modifiers in (20) lexically denote detrimental, injurious, hurtful values¹⁰ and it is not surprising that they can be enrolled as augmentative/pejorative classifiers in a derivation. A syntactic representation of this state of affairs, along the line of the model for evaluatives introduced so far, can be the one in (21).



Thus, we basically argue that nominal modifiers with temperature predicates behave like evaluative classifiers in the form of light nouns. They are directly merged with the adjectival root.¹¹ Precisely they encode an augmentative/pejorative flavor and contribute turning the adjectival predicate into a noun. In a sense, they can be taken to be the stand-alone counterpart of the augmentative suffix *-one* or, possibly the pejorative suffix *-acci-* (e.g. *gatt-accio*, bad cat) in Italian. Indeed, as illustrated in Grandi (2003: 244; cf. also Lo Duca 2004) the suffix *-on-* generates an interpretation “(x) having a certain quality or realizing a certain behavior in a strong, intense, habitual manner”. The literature highlights the attributive nature of these formations, seen as denoting “who is/has/does X exaggeratedly”.

That we are on the right track in our characterization of this kind of items is confirmed by what is noted in Savoia *et al.* (2017: 426): “[...] the normal syntactic occurrence of augmentative forms is in predicative contexts, such as *quell’uomo è un mangione* ‘that man is a big eater’; [...] the [size] morphology *-on-* introduces the evaluation ‘a great quantity of’ which quantifies over the event, characterizing it as habitual/repeated or intense. At the same time, *-on-* has a singulative effect, recalling that of *-in-*”. Namely, in the present contexts the result is a modification of the predicative content of the root, specifying an intense, exaggerate individual occurrence: they express a sort of class-based quantification on the adjectival meaning.¹²

¹⁰ Consider that the pejorative/augmentative value of words like *cane* ‘dog’ or *maiale* ‘pig’ can be also linked to the fact that they are usually employed in Italian for swearing and cursing, as illustrated by the examples in (i).

(i) a. Figlio di cane
 ‘son of a dog’
 Maremma maiala
 ‘Goddam’

¹¹ That they are strictly connected with the root is shown by the fact that it is hard to conceive an intervener between them. Consider the data in (i).

(i) ?*fa un caldo molto cane/*fa un caldo bollente bestia
 do.3SG.PRS a hot very dog/do.3SG.PRS a hot boiling beastù

¹² Interestingly Luciani (1943: 27) observes that: “The augmentative *-one*, whether found with adjectives proper or with adjectives used as nouns (aggettivi sostantivati), is similar in force to the superlative *-issimo*: e.g., un riccone, a very rich man; un vecchione, a very old man; una ragazza simpaticona, a very likeable or genial girl; quel tedesco furbone (Panzini), that very shrewd German; quel frate [...] io l’ho per un dirittone (Manzoni)”.

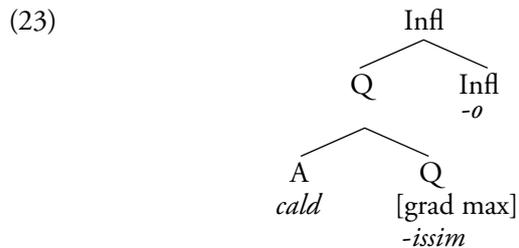
It is not surprising that other adjectives (e.g. *terribile* ‘terrible’, *bollente* ‘boiling’, *polare* ‘polar’, etc.), as we have seen in (9), can trigger the same individuating effect: they quantify over (evaluate) the property expressed by the adjectival root, pointing to an individual entity expressing that given (i.e. augmented) property.

A different process is at work when modification of the predicative root is performed through a degree modifier or a superlative. In Italian, either pre-nominal or post-nominal adjectives can be modified by quantifiers like *più* ‘more’, *tanto/molto* ‘very/much’ that do not inflect in number (as we have seen above). Consider the examples in (22), taken from Savoia *et al.* (2017).

- (22) a. la più bella ragazza/la ragazza più bella
 ‘the most beautiful girl’
 b. delle tanto brave persone/delle bravissime persone/delle persone tanto
 brave, persone bravissime
 ‘some very good persons’
 c. due molto apprezzati autori/ due apprezzatissimi autori
 ‘two much appreciated author’

This parallelism confirms that the superlative *-issim-* is a quantifier/intensifier, interpretable as analogous to adjectival intensifiers such as *molto* ‘very/much’, which quantify on the adjectival predicate, as shown in some details in Savoia *et al.* (2017). This explains why *molto* and the superlative affix cannot appear together in a sentence.

In the context of temperature predicates, we assume that the *-issim-* is associated to a Q/[gradation] content applying to the cumulative properties of the adjectival root. Consider the representation we provide for this state of affairs in (23).



3. Some reflections on Merge, adjunction and categorial shift

Hence, we have two options to operate a quantification over a predicative adjectival root: degree modification or intensification via evaluative “light nouns” class items triggering a category shift.

As for the issue of adjunction/modification, technically, according to standard view is performed via pair-Merge (see the recent discussion in Chomsky 2020; Manzini 2021).

Actually, the “ideal” Merge operation is understood to be set-Merge within the Minimalist Program. Chomsky (2001: 6) says that: “Narrow Syntax has one operation that comes ‘free,’ in that it is required in some form for any recursive system: the operation Merge, which takes two elements α , β already constructed and creates a new one consisting of the two; in the simplest case, $\{\alpha, \beta\}$ ”. For example, a nominal item like *the dog* is understood to be conceived as a set – $\{\text{the, dog}\}$ – that is formed by the operation set-Merge from the two previously independ-

ent elements *the* and *dog*. Chomsky (*ibidem*) argue that the set $\{\alpha, \beta\}$ can be understood “as a ‘projection’ of some head of α or β ” (i.e., it could be labeled a DP). Chomsky also introduces the notion of pair-Merge, arguing that

for structure building, we have so far assumed only the free symmetrical operation Merge, yielding syntactic objects that are sets, all binary: call them simple. The relations that come ‘free’ (contain, c-command, etc.) are defined on simple structures. But it is an empirical fact that there is also an asymmetric operation of adjunction, which takes two objects β and α and forms the ordered pair $\langle\alpha, \beta\rangle$, α adjoined to β . Set-Merge and pair-Merge are descendants of substitution and adjunction in earlier theories. (*Ibidem*, 18)

Thus, in a nominal structure like *the ugly dog*, *ugly* is adjoined to *dog* via Pair Merge (\langle ugly, dog \rangle), while set-Merge applies with the article *the*, just as *dog* alone (without an adjunct/modifier). Hence, we have the structure $\{\text{the}, \langle$ ugly, dog $\rangle\}$, in which *dog* has the properties it would normally possess in non-adjoined structures, and *ugly* can be seen informally as occupying what Chomsky (*ibidem*) calls “a separate plane”. As for the facts we have considered in the present work, targeting temperature predicates, we have seen that adjunction can (optionally) determine categorial shift (thus, relabeling).

We argue that degree adjunction with adjectival predicates employing the intensifier ‘molto’ or the superlative *-issimo* is performed via Pair-Merge. Their insertion in the derivation do not produce any relevant switch at the level of categorization. A rough representation for a sentence we have considered above can be as in (24). We have Pair-Merge between the adjective and its modifier and a Set-merge operation externally merging the light verb with the adjectival item.

(24) $\{\text{fa}, \langle$ molto, freddo $\rangle\}; \{\text{fa}, \langle$ fredd, -issimo $\rangle\};$

The case with the evaluative light noun/adjectival classifiers is different because they appear to trigger a re-labeling of the predicate. As said above one can assume that roots do not have syntactic features and Merge with a categorizer is required before they can further contribute to the syntactic computation. This would easily solve the issue of relabeling. The root for *caldo/freddo* could alternatively merge with an adjectivizer or with a nominalizer, as the first step of the derivation. Collins (2002), Boeckx (2009), Panagiotidis (2014) among others argue that the functional categorizers always project and give their label to the structure.¹³ In a nutshell, from this perspective, we have an AP or a NP simply depending on the nature of the categorizer.

If we maintain that roots are selected from the lexicon with a categorial signature, as we do, things are less clear-cut. The nominal label in structure like *caldo boia* has to be provided by the stand-alone classifier, given its individuating properties that work along with the intensification value on restricting/individuating the content of the adjectival root. Actually, the mechanism is the same as with derivational evaluative classifiers (e.g. for *buffo-one* noun from *buffo* adjective in (17c)).

A further complication is that in the recent minimalist theory, Chomsky (2013, 2015) argues that Merge applies freely and it does not encode a label. As said above, Set-Merge forms a two membered set $\{\alpha, \beta\}$ and there is no labeled categorial node above α and β . Labeling is,

¹³ In syntactic theories of word formation like Distributed Morphology (DM), lexical roots are category neutral (Marantz 1997). They are categorized by combining with a category-assigning head. Following a phase-based/transfer approach to interpretation, DM assumes that roots are not independently interpreted, given that they do not constitute a syntactic phase (cf. Marantz 2007). When a given root is categorized it undergoes Merge with a category head and receives an interpretation at C-I.

however, necessary for syntactic objects to be interpreted. Thus, Chomsky assumes that there is a fixed labeling algorithm that licenses Syntactic Objects. He argues that labeling is required at C-I interface and for the process of externalization and therefore it must take place at the phase level, as part of the transfer operation.

Following Manzini (2021), we tentatively assume that *n* is a phase head instantiated here by the evaluative classifier/light nouns *boialcane*, etc. that Set-Merge with the adjectival base.¹⁴ It provides the label for the structure to be interpreted at C-I. A further Set-Merge operation is then assumed by the labelled syntactic object and the determiner. A rough representation is provided in (25).

(25) [_{DP} un [_{NP} [_A caldo [_n cane]]]]

This is clearly a tentative solution to be worked out in more details in future research. What we are interested in this section, is simply to highlight the problem posed by adjunction, when it does not simply work within “a separate plane”, but actually triggers interpretive and structural puzzles.

4. Conclusion

In this squib, we have considered the issue of categorization applied to temperature terms targeting in particular the use of nominal elements as intensifiers in a series of morphosyntactic contexts in Italian. Specifically, we have shown that a set of nouns can be used as evaluative (augmentative/pejorative classifiers), and that -at the same time- they can trigger a nominal value for the (adjectival) items they modify. We have shown that we have two options to operate a quantification over a predicative adjectival root: degree modification or intensification via evaluative ‘light nouns’ class items providing a category shift. We have provided a theoretical model based on Savoia *et al.* (2017) for the items introduced in the discussion. Finally, we have briefly considered the empirical data in the light of contemporary Minimalist assumptions on the operation (i.e. Pair-Merge) performed with modification/adjunction.

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¹⁴ The same evaluative class value is expressed by the adjectives *polare*, *bollente* etc. which again individuate and quantify over the cumulative properties of the root, as illustrated in Section 2.

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