Cognitive motivation in English complex intensifying adjectives

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Introduction

Intensification, or the expression of the semantic role of degree (Quirk et al. [1985]), has long intrigued scholars from different walks of life and theoretical backgrounds. Taking inspiration from well-known publications such as Bolinger [1972] or van Os [1989], the relevant literature has developed considerable interest in diachronic and synchronic aspects of adjective intensification as carried out by degree adverbs (Peters [1993]; Lorenz [2002]; Ito & Tagliamonte [2003]; González García [2014]) and, albeit more recently and more slowly, in noun intensification as expressed by adjectives (Athanasiadou [2006]; Ghesquière [2014]).

Although all parts of speech can be intensified when projecting on a scale of degree, adjectives – which denote properties in the world – are the natural locus of intensification, as achieved via a varied set of intensifying devices. English has several ways of conveying intensification in composite wholes: among others, degree adjuncts (Quirk et al. [1985]) in predicate-intensifier combinations (very good, extremely interesting), intensifying affixes in complex words (e.g. supercadifragilisticexpialidocious), intensifying modifiers in compounds like snow-white, reduplications and redundant collocations like stunningly beautiful or howling funny, as well as repetition in (partially filled) idioms like whiter than white (Bolinger [1972]).

Given size and uncertain limits of this ever-changing prototypical category, we cannot even hope to carry out a systematic analysis of all patterns. Rather, we narrow down discussion to adjective intensification in English and complex intensifying constructs in particular. An enormous literature has been devoted to diverse features of English degree adverbs and Adv-Adj collocations – from early descriptive works such as Stoffel [1901] and Borst [1902] down to the present (Spitzbardt [1965]; Peters [1992]; Stenström [1999];
Lorenz [2002]; Ito & Tagliamonte [2003]; Cacchiani [2009]; Breban & Davidse [2016] inter alios. Though morphology appears to have been less concerned with intensification in complex adjectives, conspicuous exceptions are discussions of English intensifying prefixes in Bauer, Lieber and Plag [2013] and Dixon [2014], Rainer’s [2016] chapter on intensification in morphology, and Booij’s [2010] work on intensification in Dutch compounding and derivation within the broader debate on the role of analogy and abstract schemas in word formation. In fact, research on intensifying phrases has often looked at constructs such as all new or snow-white without drawing a line between phraseology and morphology. For one thing, it is not always easy to set word formation apart from other categories, and for another, the semantic relation R between constituents offers a major point of convergence between intensifying phrases and word formation.

Taking inspiration from Rainer’s [1983] early study of intensification in Italian, we assume parallels in the conceptual motivation behind intensifying phrases and word-formation (Cacchiani [2010a] and [2011]; Rainer [2016]). Our effort in this chapter thus concentrates on delineating the cognitive determinants of intensification in N-A and A-A compounds (e.g. snow-white, red-hot), with an eye to prefixations and adjective reduplications. It should be noted, however, that while we acknowledge the contribution of quantitative data analysis (cf. e.g. Zeschel [2012]), the analysis at this stage is strictly qualitative.

Specifically, we adapt for our purposes Booij’s [2010] exploration into Dutch intensifying compounds and derivations within Construction Morphology, whose ideas of constructional schemas and a hierarchical lexis closely align with Cognitive Grammar (Langacker [1987]). The discussion shall enable us to expand on the framework of analysis adopted in Cacchiani [2010b]. While we rely on landmark publications on the development of adverbial intensifiers from other categories (Bolinger [1972]; Lorenz [2002]), we take a functionally-oriented approach on intensification. For discussion of the semantic role of degree, we make the choice to use Paradis’ [2004] and [2008] theory of Lexical Meaning as Ontologies and Construals so as to address (non-)compositionality and valence relations based on the assumption of harmonious degree correspondence within complex adjectives as composite wholes. As regards reflection on the link between degree, cognitively-based motivation and paths to intensification, we draw on Lakoff and Johnson’s ([1980] and [1999]; Lakoff [1987]) Cognitive Metaphor Theory as applied in Kirschbaum [2002]; this will enable us to discuss the contribution of cognitively-based motivation and contextual and encyclopedic knowledge to the interpretation of complex intensifying adjectives.

The paper is structured as follows. Section 2 takes a brief view of intensifiers by summarizing major findings in phraseology. The emphasis lies on the uncertain limits and delimitation of this extremely varied and ever-changing lexico-functional category. Section 3 shifts attention towards cognitive linguistic approaches to paths to intensification, subjectivity and degree. Having begun to articulate our framework of analysis, in Section 4 we address the conceptualization of complex intensifying adjectives and anchor the relation of intensification R to schemas that might be implicit in the examples at hand. Examples come from a total of 300 constructs which I collected from grammars (Quirk et al. [1985]), studies in English morphology (Marchand [1969] inter alios), the Oxford English Dictionary online (OED), the British National Corpus (BNC), and online Google searches (https://www.google.com).
1. Terminological issues

The basic syntactic requirement for analytical intensification (or degree modification) to occur in Adv-Adj constructs is minimum distance or adjacency (van Os [1989: 2ff]). As already observed, intensifiers (also called degree modifiers or degree words) are linguistic elements, typically adverbs (Quirk et al. [1985: degree adjuncts]), which express the semantic role of degree. Intensiﬁability represents the minimal requirement at the semantic level (van Os [1989: 2ff]). That is, intensifiers provide a vague modiﬁcation along an abstractly conceived scale of degree (e.g. very interesting, extremely cheap).

More speciﬁcally, semantically we can identify two sets of intensiﬁers on the basis of their positive or negative orientation (Quirk et al. [1985: 589ff]): ampliﬁers scale upwards from an assumed norm the property expressed by the modiﬁed element (very, extremely, absolutely). They are comprised of maximizers, which denote the upper extreme of the scale (absolutely, completely), and boosters, which denote a high degree (very, badly, bitterly). Conversely, downtoners have a general lowering effect. They are further categorized into approximators (almost, nearly), compromisers, with a slight lowering effect (a bit, little, rather), diminishers, scaling downwards and roughly meaning “to a small extent” (partly, only), and minimizers, or negative maximizers (hardly, in the least).

For a number of reasons, we prefer the terms intensification and intensiﬁers over degree modiﬁcation and degree modifier/degree expression/degree word, which are used in the literature for categories that interact differently with scales: scale adjusters, (degree of) quantity modiﬁers, excessives (also called excessive degree modiﬁers), and emphasizers.

A ﬁrst point we might make concerns the widely accepted view that intensiﬁcation relies on grading (Bolinger [1972]; Vermeire [1979: 23]; Quirk et al. [1985]), or the psychological process which precedes measuring and counting (Sapir [1944: 122]). For instance, we compare A and B along a dimensionality scale long before we can specify, either exactly (10 centimeters) or vaguely (much, slightly), to what extent A is bigger or smaller than B (adapted from Klein [1998: 3]). This is to say that quantiﬁcation and comparison interact with scales. Other categories that rely on grading are superlatives (Adj-est, the most Adj), equatives (as), excessives (too, enough) and emphasizers (really, plainly).

If we now turn to the degree of intensiﬁcation conveyed by individual modiﬁers (Table 1), irrespective of the classiﬁcation adopted what emerges is a basic distinction between degree-modifying intensiﬁcation (III to VII; Ia, Ib, I1b to I1d) and, albeit with fewer types, degree-ﬁxing intensiﬁcation (I, II; Ia, I1a), which comes close to emphasis and focus marking.

Table 1. Degrees of intensiﬁcation

<table>
<thead>
<tr>
<th>DEGREE CATEGORY</th>
<th>ADVERB</th>
<th>SCALE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adapted from van Os [1989]; [Klein 1998]</td>
<td>Quirk et al. [1985]</td>
<td></td>
</tr>
<tr>
<td>I – Completive/ Absolute degree (X)</td>
<td>Ia – Ampliﬁer – Maximizer</td>
<td>absolutely, completely</td>
</tr>
<tr>
<td>II – Approximative degree (II if not I)</td>
<td>I1a – Downgrader – Approximator</td>
<td>almost, nearly</td>
</tr>
</tbody>
</table>
III – Extremely high degree (III if not I)  
Ia – Amplifier – Maximizer  
**extremely**, too  
Opposites

IV – High degree (IV if not III)  
Ib – Amplifier – Booster  
**very**  
Opposites

V – Moderate degree (V if not IV/III)  
Iib – Downgrader – Compromiser  
**rather, pretty**  
Opposites

VI – Minimal degree (VI if not V/IV/III)  
Iic – Downgrader – Diminisher  
**somewhat, a bit**  
Opposites

VII – Quasi-negative degree (VII if not VIII)  
Iid – Downgrader – Minimizer  
**little**  
Opposites

VIII – Negative degree (X)  
**not**

12 In addition to degree meanings, intensifiers carry expressive meanings insofar as they are indexical of the speaker’s personal evaluation/attitude/point of view (Bühler [1934]): the focus is on the subject. In cognitive linguistic terms, they can thus be said to express and achieve subjectivity (Athanasiadou [2007]). In this context, intensifiers may contribute speech act modification (Searle & Vandervecken [1985]), as in (1) as opposed to (1i): in (1) **totally f*****g** contributes to pragmatic intensification in that it modulates the speaker’s involvement and commitment to the truth of her proposition.

(1) I’m **totally f*****g** confused. (BNC, BJC)  
(1i) I’m confused. (constructed)

13 Crucially, intensifiers are always optional. And yet, they “afford a picture of fevered invention and competition […], for in their nature they are unsettled. They are the chief means of emphasis for speakers for whom all means of emphasis quickly grow stale and need to be replaced” (Bolinger [1972: 18]). Intensifiers represent an extremely varied and ever-changing set. They take an intermediate position between lexis and grammar: next to core items, or full, central members of the category, which express degree (**very** or **extremely**), less grammaticalized, polyfunctional items form a gradient from central to peripheral, all the way down to one-off occasionalisms such as **read-out-loud-to-complete-strangers** in **read-out-loud-to-complete-strangers funny**. Specifically, the constant need for new, more emotional and expressive elements – to quote Bolinger [1972], “the human fondness of exaggeration” – explains continuous variation within the category, and amplifiers in particular, and accounts for ongoing development from categories that relate to scales in different ways: expressions of quantity (**far**, **greatly**, **highly**); identifiers (**so**); modal adverbs and emphasizers (**really**, **very**); qualitative and evaluative expressions (**incredibly**, **unbelievably**, **badly**, **bloody**) (Peters [1993]).

14 It is generally agreed that the shift to intensifying meanings proceeds from concrete to abstract, and from objective to subjective. Following their first inception into the language, intensifiers may fall into disuse, disappear, or undergo (relative) semantic bleaching and go all the way towards grammaticalization, thereby turning into functional words and losing their original lexical meaning, e.g. **very** (Breban & Davidse [2016]).
As for adverbs, existing descriptions of the category have identified the following mechanisms of intensification on the basis of source domain and extent of grammaticalization (Lorenz [2002]; Cacchiani [2009]):

- **degree**, for grammaticalized intensifiers (*very*)
- **comparison** (*extraordinarily*)
- **modality** (*genuinely, truly, really*) and focus marking (*just*)
- **telic intensification**, which indicates that a norm is (over-)reached (*unbelievably, unutterably*)
- **non-telic (polyfunctional) intensification** (*amazingly, stunning(ly]*)
- **semantic feature copying**, whereby the intensifier repeats (a good part of) the meaning of the element it modifies (*radiantly cheerful*)
- **taboo words** (*bloody, damn*)
- **phonestemes**, or ‘noise metaphors’ that denote strong emotional reactions (e.g. *screaming(ly)*)

It should be noted at this point that in formal approaches to degree modification adverbs like *almost, completely or fully* are understood as proportional modifiers (Kennedy & McNally [2005a]), while the excessive degree (*too* and the likes) appears to differ from intensification proper (Doetjes [2008]). The logic behind this is that in comparatives, superlatives, equatives and excessives grading illustrates scale adjusting via reference to a comparison phrase which sets a new standard for the relevant scale. Yet, when the standard of comparison serves as a natural reference point, intensification can be achieved analytically in set phrases or compounds (respectively, *whiter than white* or *snow-white*; Section 4.2).

Intensifying meanings initially emerge through conversational implicature in untypical contexts and may later consolidate through repeated language use and countless usage events (Diewald [2002]). Synchronically, this may result into layering (Hopper & Traugott [2003]). One such example is *too*. As an excessive, *too* is understood against a contextually determined and objectively valid standard of comparison, or the maximal value of admissibility for the comparison complement (2). What makes the intensifying reading readily available is modification of the head for a standard that remains unexpressed and clearly varies at the discretion of the speaker, as in (3), where *sexy* conveys subjective evaluative-attributive features that are reference-free (Paradis [2008]). Importantly, entailment relations in suspension tests along the lines of Klein [1998; Footnote 1] can serve as a diagnosis for multiple meanings: contrary to (2), which does not entail (2i) nor (2ii), (2i) entails (2ii) (*Sue is tall, if not very tall*) and (3) entails (3i) (*I’m sexy, if not too sexy*).

(2) Sue is too tall to be a professional gymnast. (constructed)
(2i) Sue is very tall.
(2ii) Sue is tall.
(3) I’m too sexy. (BNC, CK5)
(3i) I’m sexy.

2. Conceptualizing intensification

Having provided a working definition of intensifiers and intensification, this section is organized around construction-based and cognitively-based studies that address analytical intensification as expressed in complex adjectives. With Goldberg [2006], we define constructions as conventional/symbolic associations of form-meaning pairings that
are found at all levels of descriptions (phonological, syntactic and semantico-pragmatic). What is obvious from the literature (Zeschel [2012], adapted) is that the observations about intensifiers and other degree expressions (Section 2) can be framed within a Traugottian approach that posits constructions with different degrees of abstractness and individual constructs that instantiate or expand constructions (Traugott [2007]).

For instance, we assume the following high-order constructional schemas (macro-constructions) for (i) predicate-intensifier collocations, (ii) scale-adjusting comparisons and (iii) excessives with a minimal standard of comparison.


Intensifiers affect the computation of the positive form (Kennedy & McNally [2005b]).

(ii) [Adj-er + than Ind] → ‘Adj with relation Plus to Standard’.

Comparatives take a measure function and assign it to a new scale whose minimal scale is the value denoted by the standard of comparison, as in (4).

(4) Is it normal that I look more pregnant than I really am? (www.babycenter.com)

(iii) [Adj enough to Inf] → ‘Adj with relation Equal to Standard’

Enough to introduces a comparison between two extents.

(5) Tom is tall enough to be allowed access to the 50m swimming pool.
(constructed)

Within Meaning Text Theory (Mel’čuk, Clas & Polguère [1995: 136]) intensification and grading are seen as two separate functions: unlike comparatives, which serve the lexical function [Plus/Minus], upgrading intensifiers express the meaning ‘very’, ‘intense’, or, in short, the lexical function [Magn] as against the opposite subfunction, or downgrading intensification ([AntiMagn]). This draws a line between (i) and (ii). Excessives (iii) are yet another case: in (5) enough takes as its acceptable standard of comparison the minimal value of the property, which, in its turn, is contextually determined by the linguistic co-text (swimming pool safety regulations in the sentence complement) (Cacchiani [2010b]).

Among sets of constructions that behave similarly (meso-constructions), we would count [a bit/lot of N] as distinct from [(a) kind/sort of N] (Zeschel [2012: 12]).

Third, micro-constructions are individual construction types (e.g. [very A] as distinct from [really A]). The emphasis in this paper lies on intensifying constructs such as mega-rich and super-good, i.e. empirically attested tokens of micro-constructions, which unify properties at the phonological, syntactic and semantico-pragmatic levels (Booij [2010]).

### 2.1. Scales, degree and boundness

In cognitive semantics, meaning is characterized as conceptual structure and is constructed dynamically in mental spaces or domains. Lexical meaning is located in mental spaces. Conceptual space is structured relative to two types of knowledge structures: (i) content structures (things, events, states), and (ii) configurational structures that combine with content structures, such as boundaries and scales.

Broadly working along the lines of Cognitive Semantics (Langacker [1987]; Croft & Cruse [2004]), Paradis [2004, 2008] sees lexical meanings as constrained by conceptual knowledge (knowledge of content structures and schematic/configurational structures) and
operations which structure the domains (modes of construal) invoked by forming plausible inferences based on encyclopaedic knowledge in different contexts and situational frames.

Scales, we have seen, can be either bounded or unbounded. Intensifiers move a property of entities along bounded scales, or fix it on unbounded scales. It seems safe to say that intensifiers must work in harmony with the items they modify (Quirk et al. [1985]). If DEGREE is a configuration that maps lexical items and their meanings, there must be some correspondence between intensifiers and the item they select, that is, the pairing/mapping must satisfy a valence relation (Langacker [1987]). Within Paradis' [2004, 2008] theory of Lexical Meaning as Ontologies and Construals, the Harmonious Configuration Hypothesis predicts configurational harmony between intensifiers and the meaning structures they modify (Paradis [2008: 325]). Intensifiers thus foreground degree in the words and content structures they associate with, where degree is otherwise backgrounded and content foregrounded. For instance, very foregrounds degree in very sick, good in a good book and a good read, and well in well pleased or well wicked (though not in well paid).

In Paradis' [2008] view, intensifiers modify semantic structures or ontologies that are configured on the basis of the schematic/configurational meaning structures SCALES, BOUNDEDNESS, DEGREE.

Amplifying scalar modifiers (very, extremely), also called boosters or intensifiers of the high and extremely high degree: they modify unbounded scalar antonyms, which project on a more-or-less scale (very nice, extremely interesting).

Among downgrading scalar modifiers are moderators, which approximate the middle range of the scale (rather interesting), and diminishers, which attenuate the modified property (somewhat strange).

Amplifying totality modifiers (completely, absolutely), also called completives or intensifiers of the absolute degree, bring about degree-fixing intensification and combine with gradable structures. Accordingly, they associate with (a) bounded, non-scalar complementaries (dead), which project on an either-or scale, and (b) bounded, scalar antonyms (excellent), which are confined to the positive and negative extremes of a gradable scale (implicit superlatives in Cruse [1986: 216-217]).

Approximators scale a property downwards and indicate that that property falls short of the boundary (almost empty).

Thus, the Harmonious Configuration Hypothesis predicts that intensifiers which associate with a bounded scale cannot modify adjectives which associate with unbounded scales (*almost happy). The other way round, intensifiers that modify for a high degree cannot combine with implicit superlatives (*very gorgeous).

The linguistic environment of a word posits strong constraints on its construal, which may acquire a special default status (Croft & Cruse [2004]). Words, however, may be construed differently in specific contexts. One example are completives. When combining with unbounded meaning structures (absolutely interesting), they are construed as intensifiers of the extremely high degree and coerce a boundary reading for the property denoted by the head (interesting ‘in all respects’).

While by default non-degree structures do not allow intensifiers, they may behave as degree words in context, e.g. air-conditioned in (6), said of a hotel’s cooling system that works very well. In particular contexts, bounded meanings turn into non-bounded
meanings, as in (7) about a woman in the advanced stages of her pregnancy. Here, the high degree intensifier very foregrounds gradability in very pregnant.

(6) That’s very air-conditioned. (www.wheretostay.com › ... › Grenada)
(7) She looks very pregnant. (BNC, B3K)

34 An additional example is the occurrence of expressions of completeness and incompleteness with the [It is neither X nor Y] construction. The construction, Croft and Cruse [2004: 187] argue, coerces a hybrid construal for the pair of opposites clean and dirty in (8), where dirty is construed as an antonym (unbounded) and clean is given an absolute construal (it is conceptualized as bounded).

(8) It is neither clean nor dirty. (Croft & Cruse [2004: 187])

35 Intensification may emerge also via coercion in particular constructions, as in the [Adj, er than Adj] construction (9). In comparative set phrases of the type cleaner than clean and whiter than white, intensification pertains to the overall construction, not to scale adjusting via comparative morphology, and is based on a combination of mappings among which are OVERREACHING THE POSITIVE DEGREE/NORM IS MORE and the MORE IS UP metaphors (Section 5.1). If a property surpasses itself, then it is present at the highest possible degree and is therefore conceptualized as maximally conforming to the prototype and ideal exemplar of the category.

(9) ..., you’ve got to be cleaner than clean, whiter than white, ... (BNC, K73)

2.2. Paths to intensification

36 Conceptual Metaphor Theory (CMT), the theory of metaphor proposed by Lakoff and Johnson (Lakoff & Johnson [1980], [1999], Lakoff [1987]), sees metaphors not as a purely linguistic phenomenon but as cognitive mappings of one conceptual domain onto another – which guide human reasoning and behaviour. Metaphor and metonymy are operational Idealized Cognitive Models (ICMs) that operate on other ICMs (frames and image schemas). Metaphorical projections between source and target domains (TARGET DOMAIN IS SOURCE DOMAIN) and metonymic shifts within domains (typically SUBDOMAIN/SOURCE DOMAIN FOR MATRIX/TARGET DOMAIN, with reference expansion) allow conceptual mappings from concrete to abstract domains. Paths to intensification are understood as a shift in conceptualisation from content domains to the schematic, configurational domain of DEGREE (cf. Paradis [2008] and references there). Diachronically, the process points to subjectification (Traugott [1995]), or the development of the grammatical expression of the speaker’s belief and attitude. Synchronically, intensifiers conceptualise the speaker’s perspective on an entity (Athanasiadou [2007]) and foreground the subjective component immanent in the objective conception (Langacker [1999], in Athanasiadou [2007: 559]).

37 In her PhD dissertation on intensification in German, Kirschbaum [2002] provides in-depth discussion of the development of intensifiers via metaphoric and metonymic scale transfer. Moving on to English (Zeschel [2012]), several amplifiers can be conceptualized metaphorically in terms of experientially concrete quantity expressions: A HUGE AMOUNT (LARGE MEASURE) IS A HIGH DEGREE OF INTENSITY motivates much loved (for LARGE MEASURE) or completely/totally wrong (for COMPLETENESS). Intensification, Kirschbaum’s [2002] argument goes on, is also conceptualized as height (highly), depth (deeply), size (hugely), distance (by
far), weight (heavily). Other conceptual metaphors are a strong degree of certainty is a high degree of intensity (absolutely wrong, ab brill [absolutely brilliant], really nice), a strong positive or negative evaluation/expression of disbelief is a high degree of intensity (awfully, supremely, super), and a strong perceptual stimulus is a high degree of intensity (roaringly funny).

Consider also a strong emotion/emotional reaction is a high degree of intensity (miserably unhappy, fucking amazing) and over-reaching or deviating from an acceptable norm is a high degree of intensity (too, excessively, extraordinarily, unbelievably). Semantic feature copying (Section 2) is revealed in miserably unhappy, which may be conceptualized in terms of the more is up metaphor (Lakoff [1987]). The intensity implicature emerges pragmatically from the attempt to normalize repeated access to the same region in the domain of unhappiness. (See Section 5.2 for more on semantic feature copying.) Collocations such as fucking amazing and telic intensification in unbelievably foolish also allow for the ‘so A that V’ paraphrase, whereby a cause is metonymically accessed via its effect (‘X is so amazing that I’m fucked’; ‘X is so foolish that I can’t believe it’).

Metonymies map one conceptual category onto another within the same conceptual domain or more specific frame within the same idealized cognitive model (ICM). Whereas this is slightly controversial with unbelievably or semantic feature copying in miserably unhappy, a case in point are ad hoc phrasal compounds such as read-bits-out-loud-to-complete-strangers funny. Here, inferring a degree correspondence involves a reference transfer or, better, a metonymic shift (effect for cause) and a metaphorical projection from the scale of perception to the scale of intensity (a strong perceptual stimulus is a high/extremely high degree of intensity).

4. Case study: complex intensifying adjectives

Section 3 put intensification into theoretical perspective. Our task now is to target for analysis intensifying relations R in complex intensifying constructs, that is, instantiations of abstract schemas which generalize about sets of existing complex words. Multiple inheritance trees are used to express generalizations about types and subtypes of intensifying constructs. In addition, we discuss conceptual motivation along the lines of cognitively-based work on intensifiers in order to gain a better understanding of intensifying adjectives. We rely on the OED (3rd edition) for the meaning representations of the composite’s constituents.

Following Booij’s [2009] and [2010] treatment of Dutch compounds in Construction Morphology, we assume the general template \([a]_{x} \rightarrow [b]_{y} \rightarrow [SEM]_{z}\) as the abstract schema for English right-headed endocentric compounds: ‘a and b stand for arbitrary sound sequences and i, j, k stand for the lexical indexes on the phonological (PHON), syntactic (SYN) and semantic (SEM) properties of words. An abstract schema or template is the formal representation of a construction – in Booij’s [2009: 201] terms, “a particular configuration with a specific meaning correlate”. The meaning of the constituents as well as encyclopedic and contextual knowledge determine the nature of R, which is therefore left unspecified in the general template above.

In the following, intermediate nodes with different degrees of generalization are posited between the most abstract schemas and individual lexical items, whose simplified substructure will be represented in the form of multiple inheritance trees (i-viii below).
While no attempt is made at this point to draw a line between phrasal and word constructs, our main interest rests upon adjectival compounding (sky-blue). In intensifying constructs, a degree configuration permits the integration of modifier and head, or the profile determinant (Langacker [1987]), into a coherent structure. In line with research on patterns of intensification in phrasal constructs (Bolinger [1972]; Lorenz [2002]; Cacchiani [2009]), we identify three broad types (Cacchiani [2010a]): a first type which, generally speaking, parallels the degree pattern (type all-new); second, a type that parallels the semantic-feature-copying pattern (snow-white, freezing cold); and, third, a type where intensification relies on the integration of scales which associate with lexical meanings typically located in different knowledge domains (red hot and roaring drunk). Prefixation and reduplication will be discussed only insofar as they help shed some light on types 1 to 3.

4.1. Type all-new

In type all-new constructs the semantic relation R parallels the degree pattern highlighted for predicate-intensifier collocations (i). The type covers derivations and grammaticalized (Hopper & Traugott [2003]) constructs in which the modifier has undergone reanalysis into intensifier.

Degree intensification rests on a scale transfer from expressions of size and quantity motivated by the metaphors MORE IS UP, BIG IS UP (Lakoff [1987]) and A HUGE AMOUNT IS A HIGH DEGREE OF INTENSITY. Examples here are full (OED: FULL: adv., a conversion from the corresponding adjective), or all.

In all-red, all can be conceptualized as a set quantifier [Tribushinina 2008], while it verges on emphasis in all-female. In all-important or all-new it is conceptualized as an intensifier with a subjective meaning.

Another subtype comprises prefixes of classical origin used as independent units of meaning to express the extremely high degree (cf. OED: MEGA; SUPER), e.g. mega, as in mega rich (iii) (A HUGE AMOUNT/LARGE MEASURE IS A HIGH DEGREE OF INTENSITY), or super, as in super funny, super good (A STRONG POSITIVE OR NEGATIVE EVALUATION/EXPRESSION OF DISBELIEF IS A HIGH DEGREE OF INTENSITY).

<table>
<thead>
<tr>
<th>(i) [XY]r</th>
<th>‘Yi with relation R to X’</th>
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<tr>
<td></td>
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<tr>
<td>[(all)[new]]s</td>
<td>‘DEGREE new’</td>
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<td>[all]s[\new]s</td>
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<table>
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<th>(ii) [x [y]y]y</th>
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Related subtypes parallel either the comparative pattern of intensification (ultra) or telic evaluation (premier). Ultra means ‘an excessive or extreme degree of the quality or condition expressed by the adjective forming the second element of the [construct]’ (OED: ULTRA-, prefix, Latin). Some examples are ultraconservative, ultra-rich (where ultra-modifies for the extremely high degree) and ultragorgeous (with modification for the absolute degree). The shift from excessive to intensifier can be computed inferentially either as a combination of the metaphors AN EXCESSIVE AMOUNT IS A HUGE AMOUNT and A HUGE AMOUNT IS A HIGH DEGREE OF INTENSITY or as a metonymic shift (INADMISSIBILITY OF A PROPERTY/OVERREACHING THE NORM FOR HIGH DEGREE OF INTENSIFICATION).

In like manner, the lack of an objectively verifiable external standard also accounts for the subjectivity of originally telic intensification in premier silly or premier good (OED: PREMIER: A. adj. 1. a. First in importance, rank, or position; chief, leading, foremost): amplifying intensification is only a small inferential step from overreaching a limit.

4.2. Type snow-white

The snow-white type comprises attributive and coordinate compounds in which the semantic components take different positions along the scale of degree. More specifically, snow-white10 illustrates the case of an attributive compound (Bisetto & Scalise [2005]) in which the modifier component acts as a property of the head.11 Intensifying adjectival compounds are endocentric compounds; repeating Booij’s [2009] treatment of Dutch sneeuwwit, a multiple inheritance tree can be posited in the lexicon for English snow-white.

Snow serves as a perceptually salient natural prototype or natural reference point (Wierzbicka [1996]). The attributive compound may metonymically evoke an upper limit on the scale of color intensity (in terms of saturation) or, more to the point, maximum conformity to the best/ideal exemplar, and thus serve as a maximum cognitive reference...
point. Although snow-white clearly illustrates a relation R in which intensification rests on scale comparison for the same property, meaning construal is a flexible and dynamic process. In context, snow-white may be contrasted with pale white or ivory white, thus profiling a specific region within the conceptual color for white.

Unlike snow-white, all-white and the phrasal construct completely white construe the maximum reference point or boundary of a region in one domain in the conceptual space of colors, foregrounding an extent along a 2- or 3-dimensional space (Tribushinina [2008: 67-89]).

Other attributive compounds in which a degree construal emerges through conceptual integration of scales based on a maximum standard of comparison are coal-black, pitch-black, jet-black, raven-black; sky-blue, sea-blue; crystal-clear, ice-clear, icy-clear; ice-cold, icy-cold; rock-hard; crystal-smooth.

Semantic feature copying is more clearly at play in coordinate compounds of the freezing cold type (iv), in which X repeats and reinforces the head Y for the extremely high degree while projecting on a higher point on the same underlying scale.

<table>
<thead>
<tr>
<th>(iv) [XY]_A</th>
<th>‘Yi with relation R to X’</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[AA]_A</td>
</tr>
<tr>
<td></td>
<td>[V-ing], [A]_A</td>
</tr>
<tr>
<td>/ \</td>
<td></td>
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<tr>
<td>[freeze-ing], [cold]_A</td>
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</table>

Juxtapositional reduplication of gradable, unbounded components is one possible variant of the semantic-feature-copying pattern. In funny funny (v), reduplication foregrounds a degree configuration in the modified conceptual structure. Based on the conduit metaphor linguistic expressions are containers (Reddy [1979]), the metaphor more of form is more of content applies to the iteration of forms. If two degree scales integrate via reduplication, then more of form for more of schematic structure, i.e. degree, unboundedness and scalarity.

<table>
<thead>
<tr>
<th>(v) [XX]_A</th>
<th>‘Xi with relation R to X’</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>[funny], [funny]_A</td>
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<td>/ \</td>
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<tr>
<td>[funny]_A</td>
<td>[funny]_A</td>
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</tbody>
</table>
In a slightly different manner, reduplication of the configurational structures degree and boundedness would lead to degree-fixing intensification, as in white white when white associates with the black-white scale, a bounded degree configuration.

### 4.3. Type red-hot

The red-hot type represents the case of intensification resting on correspondence between scales associated with meanings typically located in separate domains. All the constructs come close to the additive or redundant type identified in Marchand [1969] and indicate an extreme result via similes. For conceptualization and construct interpretation, we need to rely on experiential similarities.

In red-hot (vi), we see the extension from the temperature range to the visual modality (OED: red hot, a.: 1. Of metal, a fire, etc.: that is so hot as to glow red; at red heat.).

<table>
<thead>
<tr>
<th>(vi) [XY] Y</th>
<th>‘Yi with relation R to X’</th>
</tr>
</thead>
<tbody>
<tr>
<td>[red], [hot]</td>
<td>‘hot AND/CAUSE red’</td>
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<tr>
<td>/ \</td>
<td></td>
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<tr>
<td>[red], [hot]</td>
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</tbody>
</table>

Similar to other temperature expressions, metonymic mapping grounded in perception (temperature for emotions) and the anger is heat metaphor (Kövecses [1995]) motivate using red-hot ‘[of] a thing, action, feeling, etc.’, meaning ‘burning, urgent, violent, furious; fervent, passionate’ and ‘[o]f a person’, meaning ‘highly inflamed or excited; fiery; violently enthusiastic, extreme (in some view or principle)’ (OED: red hot, a.: 2a; 2b).

A related subtype comprises complex constructs with an onomatopoeic component, or phonaesthemes, which imitate natural sounds, e.g. howling funny (vii):

<table>
<thead>
<tr>
<th>(vii) [XY] Y</th>
<th>‘Yi with relation R to X’</th>
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<tbody>
<tr>
<td>[AA]</td>
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<tr>
<td>/ \</td>
<td></td>
</tr>
<tr>
<td>[[V-ing], [A]]</td>
<td>‘fun AND/CAUSE roaring’</td>
</tr>
<tr>
<td>/ \</td>
<td></td>
</tr>
<tr>
<td>[howl-ing], [fun(nyl)]</td>
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</table>
In howling funny, howling is a degree intensifier. The degree configuration is grounded in sound iconism (Anderson [1998]; Fischer & Nänny [1999]). Diachronically, howlingly was initially used to denote an extremely long, mournful sound (said of animals), and, later, also a savage yell of rage or disappointment (often used contemptuously). As a third step howling(ly) came to lose part of its original lexical meaning and of its negative connotations (OED: howling, ppl. a.). It is now metonymically understood as indicating the result of excessive fun and laughter, also on the basis of knowledge about strong emotions and the inability to hide them easily or down-regulate them efficiently. As such, howling(ly) is construed as an intensifier which foregrounds extremely high degree in the gradable head. Redundancy also plays a role.

One possible variant of the red-hot type is exemplified by spoiled rotten and bored stiff, or predicate complements that express an extreme result via similes (Bolinger [1972: 19-20]) and exemplify the case of opposite directionality of the semantic relation ‘and/cause’ (‘X with relation R to Yi’). In spoiled rotten, morality is conceptualized as decay. In bored stiff (viii), stiff foregrounds via metonymic mapping (effect for cause) the extreme result of boredom (OED: rigid A. adj. 1. c. colloq. to bore (also scare, shake, etc.) a person rigid: to bore (scare, shake, etc.) a person excessively, or to an intolerable degree. Cf. to bore (scare, etc.) stiff at stiff adj. 11b.).

<table>
<thead>
<tr>
<th>(viii) [XY]</th>
<th>‘Yi with relation R to X’</th>
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<td></td>
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<tr>
<td>[AA]</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>[[v-ed],[A]]</td>
<td>‘bored AND/CAUSE stiff’</td>
</tr>
<tr>
<td>\</td>
<td></td>
</tr>
<tr>
<td>[bore-ed],[stiff]</td>
<td></td>
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</tbody>
</table>

With bounded meanings, the modifier foregrounds a perfect match with the maximum. This is the case of roaring drunk, a clear instance of layering, in which content and schematic degree configuration still coexist (OED: roaring, adj. and adv. B. adv. 1. roaring drunk: extremely and noisily drunk).

**Conclusion**

Our purpose has been to investigate intensification within cognitive semantics and address the conceptualization of complex intensifying adjectives in particular. We have seen that configurational structures such as degree, scale and boundedness are essential and that the development into intensifiers involves a move towards subjectivity. Importantly, intensification rests on a shift from content domains to the configurational domain of degree via conceptual metaphor and conceptual metonymy, which can also operate on perceptually salient maximum reference points.
As regards complex intensifying adjectives, the integration of constituents into the composite structure relies on harmonious relations and correspondences between substructures. Specifically, three types of complex intensifying adjectives can be distinguished.

In the \textit{all-new} type intensification rests on a scale transfer from expressions of size and quantity. The relation \( R \) is interpreted as ‘degree’ as it parallels the \textit{degree} pattern of intensification which characterizes grammaticalized intensifiers (\textit{very}). Prefixes of classical origin (\textit{mega}, \textit{super}-) also belong here. Possible variants are complex adjectives such as \textit{ultra-rich}, which indexes the speaker’s perspective and parallels the \textit{comparative} pattern by virtue of the lack of an external standard of acceptability. The lack of an objectively verifiable external standard also accounts for the subjectivity of originally \textit{telic} intensification in \textit{premier silly} or \textit{premier good}.

A second type of intensifying constructs comprises word formations which parallel the \textit{semantic-feature-copying} pattern of intensification. The semantic relation \( R \) is interpreted as ‘as’ or ‘and’. They comprise attributive and coordinate compounds (\textit{snow white} and \textit{freezing cold}) in which the degree construal specifies a boundary or upper range of a region along one scale in one domain. One possible variant is juxtapositional reduplication, where \textit{MORE OF FORM} stands for \textit{MORE OF SCHEMATIC STRUCTURE}.

In the third type, exemplified by \textit{red-hot}, \textit{bored stiff} and \textit{howling funny}, experiential similarities are crucial for construct interpretation. The semantic relation \( R \) is interpreted as ‘and/cause’, and the degree configuration rests on the integration of scales associated with meanings typically located in separate domains.

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Cognitive motivation in English complex intensifying adjectives


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NOTES

1. By collocation we understand the habitual co-occurrence of words within a short space in a text (Sinclair [1991: 170]).


5. Table 1 matches Quirk et al.’s [1985] degrees of intensification with the subtypes identified by Klein [1998]. Working along the lines of van Os [1989], Klein uses as a diagnostics for degree type a combination of three major parameters: type of scale (Paradis [2004] and [2008]), polarity sensitivity to the environment, and the suspension test. Whereas intensifiers are seen to relate to one another in Horn’s [1989: 237] extended square of opposition in the same way as classical quantifiers do, by using the suspension test a lower degree can be suspended for a higher degree, as in *She is very fit, if not disgustingly fit*.

6. In line with Lyons [1982: 102], we understand subjectivity as “the way in which natural languages, in their structure and normal manner of operation, provide for the locutionary agent’s expression of himself or his attitudes and beliefs”.

7. A domain is broadly defined as any kind of conception or realm of experience in conceptual space serving as the conceptual basis of linguistic meaning. A word derives its meaning by imposing a particular construal, that is, via recourse to particular operations, on the content supplied by the domain (Langacker [2008: 45, 51]). Basic domains like time or colour space are not reducible to more fundamental notions. Non-basic domains incorporate or are reducible to basic domains. Labels also used in literature for non-basic domains are semantic frame (Fillmore [1982]) and Idealized Cognitive Model (Lakoff [1987: ICMs]).

8. Frames are non-operational models which provide propositional knowledge organized in sets of predicate-argument relationships; image schemas are image-schematic pre-conceptual topological representations. Idealized Cognitive Models (ICMs) are cognitive structures that are idealized for purposes of understanding and reasoning and have the function to represent reality from a certain perspective. ICMs designate any concept construed on the basis of our own perception, experience and world knowledge. Abstract concepts/domains map onto more perceptually salient aspects of the experience. This is the embodied nature of cognition. See Footnote 7 for more on the relation between frames and ICMs as well as frames and domains.

9. The Right-hand Head Rule (Williams [1981]) specifies that the rightmost member of a morphologically complex word is its head. While not universally valid, this rule accounts for the vast majority of English word formations.

10. Color terms conventionally project on prototypical scales, or scales with a term that specifies the maximal value in the middle and other members corresponding to increasingly lower non-maximal values at both sides (e.g. red as the maximal value, orange as the non-maximal value, and pink or yellow as the transition domains). Yet, for white we can posit a closed scale with limits and the complementaries black and white at the endpoints.

11. This, of course, does not exclude another, phraseologically-oriented analysis, according to which snow-white would be a reduced form of the simile “as white as snow”.

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Lexis, 10 | 2017
ABSTRACTS

This paper addresses the cognitive determinants of intensification in English complex intensifying adjectives, also taking an eye to prefixation and adjective reduplication. Based on qualitative data analysis, we shall see that configurational structures such as degree, scale and boundedness play a key role, and that the development into intensifiers involves a move from objective meanings towards subjectivity. Importantly, intensification rests on a shift from content domains to the configurational domain of degree via conceptual metaphor and conceptual metonymy, which can also operate on perceptually salient maximum reference points. Working on the assumption of parallel conceptualizations for intensifying phrases and word-formations, the chapter argues for three broad mechanisms of intensification in line with research on patterns of intensification in phrasal constructs: a degree type (all-new), a semantic-feature-copying type (snow-white, freezing cold), and a type where intensification relies on the integration of scales which associate with lexical meanings typically located in different knowledge domains (red hot and roaring drunk).

INDEX

Mots-clés: Adjectifs complexes, conceptualisation, constructions, anglais, intensification
Keywords: complex adjectives, conceptualization, constructs, English, intensification