# Good manners: On the degree effect of good events[1]

Berit Gehrke — CNRS/LLF & Paris Diderot
Elena Castroviejo — Ikerbasque & UPV/EHU

**Abstract.** This paper discusses the semantics of so-called 'degree' *well* in English and German, in examples such as *well loaded* and *gut beladen*. While in previous literature *well* is analysed as an ad-adjectival modifier (of closed scale adjectives), we propose to examine *well* as a manner adverb and to derive the manner vs. degree reading from the type of event *well* is a predicate of.

**Keywords:** modification, manner, degree, event, adverb.

## 1. Introduction

The adverb *well* across languages (henceforth WELL) has been ascribed two readings, a manner and a 'degree' reading (1), paraphrasable as 'in a good manner' and 'to a good degree', respectively.

(1)  a.  He has written the article well.                        MANNER
     b.  They are well acquainted.                        'DEGREE'

Manner WELL seems to be uniformly available and has been treated as an event predicate in the verbal domain. 'Degree' WELL, on the other hand, is not a uniform phenomenon. The examples to illustrate English 'degree' *well* generally involve participles, as in (1b) (e.g. Bolinger, 1972; Kennedy and McNally, 2005; McNally and Kennedy, 2013). In (standard) English, it is usually not possible to use *well* as a degree modifier of genuine adjectives (2a) (unlike degree modifiers like *very*, etc.); similarly for German (2b).

(2)  a.  *The train is well blue / long / beautiful.
     b.  *Der Zug  ist gut  blau / lang / schön.
         the   train is  well blue  long  beautiful

In Catalan, on the other hand, this is possible (3) (cf. González-Rodríguez, 2006; Hernanz, 2010; González-Rivera and Gutiérrez-Rexach, 2012, for similar data from different varieties of Spanish).

(3)  El  tren  és ben  blau / llarg / bonic.
     the train is  well blue   long   beautiful
     'The train is very / rather / quite blue / long / beautiful.'

---

[1]This research has been partly supported by project FFI2012-34170 (MINECO).

Based on data like these, we argue in Castroviejo and Gehrke (2015) that degree WELL comprises at least two different phenomena. On the one hand, we have a (degree-)'intensifying' WELL, which is absent in English and German, but present in Catalan and Spanish. In that paper we show that Catalan WELL has similar uses as other degree modifiers (cf. translation of (3)), and we propose that intensifying WELL expresses the speaker's approval of a property ascription.

On the other hand, we have English and German 'degree' WELL (scare quotes are meant to indicate that degree effects are just an indirect result of predicating goodness of certain events, under conditions to be spelled out in what follows), which we labeled 'manner-in-disguise' WELL in that paper, and which is the main focus of the present paper. We will argue that English and German WELL is not an adjectival degree modifier, but exclusively a VP modifier, i.e. a predicate of events (in the broadest sense, to include states). We will show that whether or not a 'degree' reading is available depends entirely on properties of the underlying verb.

The paper is structured as follows. In §2, we outline what McNally and Kennedy (2013) say about the restrictions on 'degree' WELL, their scalar account, and the problems we see with it. In §3 we change the perspective from the adjectival to the verbal domain and make more precise the conditions under which a 'degree' reading arises, by taking a closer look at German, which seems to behave like English. In §4 we outline different options to account for the 'degree' reading of the verbal modifier WELL, which all, however, face some drawbacks. Finally, §5 concludes.

## 2. 'Degree' *well* in English

In this section, we summarize what McNally and Kennedy (2013) (McN&K) say about 'degree' *well* in English (see also Kennedy and McNally, 1999, 2005). McN&K note that 'degree' *well* is possible with past participles, but usually not with genuine adjectives (recall (2)).[2] Furthermore, they posit three conditions on the 'degree' interpretation of *well*. First, it requires a gradable adjective (i.e. adjectivized past participle). Second, it requires a totally closed scale, diagnosed by modifiability by *partially/fully* (4).

   (4)   a.  The truck is well / partially / fully loaded.
           b.  ??Marge was well / partially / fully worried when she saw the flying pig.

---

[2]Kennedy and McNally (2005, 375) provide the following examples for 'genuine' adjectives with 'degree' *well*:

(1)   a.  We are well aware of the difficulties.
      b.  They are well able to solve their own problems.
      c.  The bud was well open.                          (Bolinger, 1972, 43)

We are not sure that (1a) and (1b) should be treated as genuine adjectives, whereas (1c) clearly seems to be one; similar marginal cases also exist in German. We leave such cases for future research.

Third, the standard of comparison cannot be the maximum, given the assumption that 'degree' *well* boosts the standard. For example, the sentences in (5) allow for both a manner and a 'degree' reading of *well*, whereas those in (6) only have a manner reading.

(5)  a.  They are well acquainted.                                    'DEGREE'/MANNER
     b.  The truck is well loaded.

(6)  a.  The book is well written.                                    ONLY MANNER
     b.  The hay is well loaded.

McN&K assume that the standard with deverbal adjectives is determined by the scale structure derived from the event/argument structure of the underlying verb. In particular, they argue that, when the argument is an incremental theme, as in (6), what counts as a loaded/written incremental theme can only be such that the maximum standard is met, i.e. it is completely loaded/written. Cases like these can only have a manner reading. With other arguments (e.g. (5)), the standard is not necessarily the maximum, i.e. a truck can also be partially loaded, and a 'degree' reading is available. Thus, the 'degree' interpretation is possible only if the argument of the modified participle is a non-incremental theme argument of the source verb.

They also argue that 'degree' *well* cannot be a true degree modifier. Given the assumption that degree modification binds off the degree argument, true degree modification does not allow additional degree modification (7a); however, 'degree' *well* does (7b).

(7)  a.  *{completely very / very completely} red
     b.  very well acquainted

The general idea of McN&K's analysis goes as follows. Informally, it is stated that 'degree' *well* is a special case of manner *well*, since both apply to events. Furthermore, it is argued to denote a measure function on events, and in an HPSG representation, *well*'s restriction is encoded as a relation between an event and a degree. This measure function is assumed to be the same as that denoted by the adjective *good*: it maps an event onto a(n open) scale of goodness. Finally, they build the scale structure requirements observed in (4) directly into the lexical semantics of 'degree' *well*. While we agree with the first steps of this account, we will take issue with its last point.

For the lexical representation of *well* in (8), McN&K employ the Generative Lexicon and the HPSG frameworks, but in Kennedy and McNally (2005), they provide essentially the same account, now couched within a formal semantic approach to the scale structure of adjectives. In particular, they propose that 'degree' *well* requires a closed-scale adjective as its input (represented by [0,1]) and returns a new gradable adjective meaning based on the relative adjective *good* (8).

(8)  $[\![\text{well}]\!] = \lambda G_{[0,1]}\lambda d\lambda x.\mathbf{good}(\epsilon(\iota d'[G_{[0,1]}(d')(x)])) = d$

The derived predicate is taken to measure the goodness of the event that is related to the degree to which the subject has the property named by the adjective. With deverbal adjectives, then, the degree is that to which the object possesses the relevant property as a result of participating in the event. This event of $x$ becoming $G$ is formulated as $\epsilon(\iota d'[G_{[0,1]}(d')(x)])$ in (8).

To account for the difference between 'degree' and manner *well*, McN&K propose that participles come with a telic and an agentive quale (in the sense of Pustejovsky, 1995). Under the manner reading, then, *well* applies to the event in the agentive quale, via selective binding, which leads to the assignment of a value on the goodness scale to the process of the event. Under the 'degree' reading, in turn, *well* applies to the event in the telic quale and thus a goodness value is assigned to the result state. For example, for our initial *loaded-with* (5b) vs. *loaded-on* (6b) cases, McN&K assume two different lexical entries where only the former comes with a closed-scale structure of loadedness (see op.cit. for the formalization). A state of being *loaded with* something, then, they state, can truthfully obtain as soon as the smallest loading event has occurred. Thus, there are result states of different degrees of loadedness that can be qualified with respect to the goodness scale and a 'degree' reading can be obtained. A state of being *loaded on* some container, however, which is what happens with incremental themes, will only truthfully obtain when the loading has been completed. All result states are therefore assumed to be identical in degree and it does not make sense to try to qualify them with respect to the goodness scale.

We see at least one major problem with this account. Even though McN&K aim at deriving the degree reading from the manner reading, they do not do that, as they actually do not provide an account of manner *well*. The only thing that 'degree' and manner *well* have in common is that they denote properties of events, which is what is stated in prose rather than shown formally. However, since McN&K build the scale structure conditions above directly into the lexical semantics of 'degree' *well*, they have a lexical entry for 'degree' *well* only, and it is not clear how or if this *well* can be related to manner *well*.

Thus, we take issue with building scale structure considerations relevant in the adjectival domain into the lexical semantics of an essentially verbal modifier. However, we will use the other ingredients of McN&K's account: 'degree' WELL is a special case of manner WELL, both rely on a measure function on events, and this measure function is the same as that denoted by the adjective *good*. In order to arrive at a clearer picture about the restriction on the 'degree' reading of the verbal modifier WELL, we now change the perspective and look at the verbal domain.

## 3. 'Degree' vs. manner WELL in German

In order to investigate the restriction on the 'degree' reading of WELL in the verbal domain, we switch to German, which seems to behave like the English examples discussed in the papers by Kennedy and McNally. For example, the German counterpart to their 'closed-scale adjective'

(again, this has to be read as 'adjectival participle') *loaded* (if it is the truck that is loaded) is compatible with proportional modifiers and 'degree' WELL (9a), and additional true degree modification is possible (9b); participles like *geschlossen* 'closed' behave the same.

(9)    a.   Der Lastwagen ist {halb / gut}    beladen.
           the truck       is half     WELL AT-loaded
           'The truck is half / well loaded.'
      b.   Der Lastwagen ist {sehr / ziemlich} gut     beladen.
           the truck       is very    rather     WELL AT-loaded
           'The truck is {very / rather / not} well loaded.'

With incremental themes, on the other hand, as in the case of *gut geschrieben* 'well written' or hay being well loaded (10), the 'degree' reading is not available.

(10)   Das Heu ist gut     geladen.                      ONLY MANNER
        the hay is WELL loaded

However, we have some doubts about McN&K's generalizations which were couched entirely in an adjectival perspective. First, a closed scale does not seem to be sufficient for the 'degree' reading to arise. In particular, some participles that allow modification by proportional modifiers like *partially* (11a), and thus behave like closed-scale adjectives according to McN&K, nevertheless do not give rise to the 'degree' reading (11b).

(11)    a.   Die Tür   ist {teilweise / halb / ganz} geöffnet.
           the door is   partially     half    whole opened
           'The door is {partially / half / totally} opened.'
      b.   Die Tür   ist gut     geöffnet.              ONLY MANNER
           the door is WELL opened

Furthermore, participles derived from incremental theme verbs are compatible with proportional modifiers in both languages (illustrated in (12) for English), making available a quantity scale associated with the incremental theme (see Caudal and Nicolas, 2005, for a differentiation between quantity and intensity scales), and this is also the case with both instances of *loaded*.

(12)    a.   The book is partially written. $\sim$ Part of the book is written.
      b.   The hay/truck is partially loaded. $\sim$ Part of the hay/truck is loaded.

So again, if proportional modifiers diagnose a closed scale and this were all we needed for the 'degree' reading to arise, it should arise with all incremental theme verbs as well, but it does not.

The second worry is about McN&K's general treatment of incremental theme verbs. Recently, it has been argued convincingly that such verbs by themselves do not provide a unidimensional scale to measure out the event but are simple activity verbs, or manner verbs (as opposed to result verbs), in the terminology of Rappaport Hovav and Levin (2010). For example, Kennedy (2012) himself argues that an incremental theme can be added to such non-scalar verbs to add a scale to measure out the event. However, WELL does not modify the theme but only the participle, so the participle alone cannot provide a closed scale for 'degree' WELL to apply to.[3] Under their account, this means that such verbs do not have a result state in their lexical representation (= no telic quale), but denote an activity only (= have an agentive quale). This is different for the *loaded-with* cases, which in German already come with a prefix *be-* (cf. (9a)) and are thus arguably already lexically marked for resultativity (and thus for a maximum on a scale, if you will).

Additional support for the absence of a result state in the lexical representation of these verbs comes from the fact that, out of context, they are not good inputs to adjectival passivization, precisely because they lack a stative component (13) (cf. Gehrke, 2015, and literature cited therein). Additional manner modification (in this case WELL) can render the adjectival passive construction acceptable again, but without it it can only have a 'job-is-done' reading (in the sense of Kratzer, 2000).

(13)  Das Buch ist ?(gut) geschrieben.
      the  book is well   written

Thus, we conclude that the underlying incremental verbs only have a process (activity component) for WELL to measure. This alone accounts for the unavailability of the 'degree' reading, and we do not have to resort to the investigation of open vs. closed scales.

Let us then change the perspective and ask which verbs are compatible with 'degree' WELL. The restrictions on the 'degree' reading of WELL are essentially the same in the verbal domain. To show this we will employ examples with verbal participles, which in German are formally distinct from adjectival ones. In particular, while adjectival participles combine with the copula *sein* 'be', verbal participles combine with the auxiliary *werden* 'become' (cf. Gehrke, 2015, and literature cited therein). In (14a), then, we see that WELL can have both a 'degree' and a manner reading, whereas in (14b) it only has a manner reading.

---

[3]With adjectival participles, the theme argument itself behaves like an external argument, i.e. is externalized at some point (cf. McIntyre, 2013; Bruening, 2014, and literature cited therein), so WELL clearly cannot access the verb and the theme argument together.

(14) a. Der Lastwagen wurde gut    beladen.              'DEGREE'/MANNER
        the truck        became WELL AT-loaded
        'The truck has been well loaded.'

     b. Das Heu wurde gut    geladen.                     ONLY MANNER
        the hay became WELL loaded
        'The hay has been loaded well.'

What, then, are the restrictions on both readings? First, we know that manner adverbs require eventive verbs (cf. Katz, 2003; Maienborn, 2005; Mittwoch, 2005, i.a.), so stative verbs should allow at most a 'degree' reading. In the following we investigate three hypotheses about the availability of the 'degree' reading. First, we ask whether we need a stative component in the lexical representation of the verb, i.e. a state, a result state, or a 'target state' (in the sense of Parsons, 1990; Kratzer, 2000). Second, we investigate whether we need a (potential) lack of agentivity, and third, whether we need a high degree of affectedness. We will see that while all these conditions are necessary they are not by themselves sufficient for the 'degree' reading of WELL to arise.

3.1.  Do we need a (result) state?

In (15), we see that even verbs that do not derive adjectival passives allow for a 'degree' reading, namely stative verbs, for which this is the only possible reading.

(15) a. Sie  kennen einander  gut.                        ONLY 'DEGREE'
        they know   each other WELL

     b. Sie  passen gut    zusammen.
        they fit       WELL together.

However, not all verbs with stative components allow for 'degree' WELL; cf. (11b), and its verbal counterpart in (16a). Stative object experiencer predicates like those in (16b) do not allow for WELL at all, whereas their verbal passive counterparts in combination with WELL can only have an agentive reading and WELL applies to the manner, as in (16c).

(16) a. Die Tür  wurde gut    geöffnet.                    ONLY MANNER
        the door became WELL opened

     b. *Er war gut    gelangweilt / überrascht.
        he   was WELL bored            surprised

     c. Er wurde gut    gelangweilt / überrascht.          ONLY MANNER
        he became WELL bored              surprised

This is not due to the alleged scale structure conditions of McN&K, given that both types of adjectival participles are compatible with proportional modifiers; cf. (11a) and (17).

(17)  Er war {teilweise / halb / ganz} gelangweilt / überrascht.
      he was partially   half   whole bored        surprised

This could be a blocking effect, given that we have alternative means to express something like a 'degree' reading with these adjectival participles, such as *sehr gelangweilt / überrascht* 'very bored / surprised' and *weit geöffnet* 'wide(ly) opened'. Alternatively, we could assume at least for the participles in (17) that they are directly derived from the verbal root and thus do not contain a VP (cf. lexical adjectivization in Kratzer, 2000). With these adjectival participles, then, adverbial modifiers (like WELL) would not be able to access a VP but only the AP. This, however, is not possible in languages like German, as we have already seen in (2). In Catalan, on the other hand, it is possible, and we only get an intensifying reading (see Castroviejo and Gehrke, 2015).

In sum, while a stative component seems to be a necessary condition for the 'degree' reading to arise, it is not sufficient.

3.2.  Do we need a (potential) lack of agentivity?

In (18), we see that necessarily agentive verbs (in the sense that they necessarily come with an external argument in control of the event) do not allow for the 'degree' reading.

(18)  a.  Er tötet gut.                                                ONLY MANNER
          he kills WELL
      b.  Sie ist gut   in den    Baum geklettert.
          she is WELL in the.ACC tree    climbed
          'She has climbed into the tree well.'

Thus, we could speculate whether the unavailability of a 'degree' reading might be due to the fact that the activity/volitional component of these verb( use)s cannot be absent; they are necessarily agentive. For example, there seems to be a partial correlation with whether or not a verb can participate in the causative-inchoative alternation (19).

(19)  a.  Die Tür  schließt sich.
          the door closes   SELF
          'The door closes / is closing.'

b. *Das Buch schreibt sich.
   the    book writes    SELF
   Intended: 'The book writes / is writing.'

c. #Er tötet sich.
   he   kills SELF
   (Only reflexive: 'He kills himself.')

It has been proposed that the inchoative version of this alternation involves the suppression of a cause argument, so that verbs which are specified for agents rather than causes as external arguments cannot participate in this alternation (cf. Siloni, to appear, and literature cited therein).

However, the correlation is not perfect. One of our problematic cases from the previous section is also a problematic case here, since a predicate like *open* participates in the causative-inchoative alternation (20) but only allows for the manner reading (with either adjectival or verbal participles; recall (11b) and (16a)).

(20)   Die Tür  öffnet sich.
       the  door opens SELF
       'The door opens / is opening.'

Thus, a potential lack of agentivity may be a necessary but, again, not sufficient condition for the 'degree' reading of WELL to arise.

3.3. Do we need a high degree of affectedness?

Finally, we explore the question whether the 'degree' reading requires a high degree of affectedness. The hunch that affectedness might also play a role comes from the fact that the German counterpart to the alternation we find with *load* in English, which correlates with whether or not we can get a 'degree' reading for WELL, employs different verb( form)s. In particular, the 'degree' reading is only available when the verb is prefixed by *be-* (as in *beladen*; cf. (9)), which has also been described as a prefix expressing affectedness.

Beavers (2011) posits the 'Affectedness Hierarchy' in (21), with $x$, $s$, $g$, and $\phi$ as variables over themes, scales, end states, and predicates, respectively, and with $\mathbf{g}_\phi$ expressing the target state of a given predicate $\phi$.

(21)   **The Affectedness Hierarchy**: for all $x, \phi, e$,
       $\exists s[result'(x, s, \mathbf{g}_\phi, e)]$          (quantized change)

$$\rightarrow \exists s \exists g [result'(x, s, g, e)] \qquad \text{(non-quantized change)}$$
$$\rightarrow \exists s \exists \Theta [\Theta(x, s, e)] \qquad \text{(potential for change)}$$
$$\rightarrow \exists \Theta' [\Theta'(x, e)] \qquad \text{(unsecified for change)}$$

This hierarchy, then, goes from predicates that are specified for what he calls 'quantized change' and thus involve the highest degree of affectedness (roughly, predicates lexically specified for a target state, i.e. accomplishment and achievements), to predicates that are unspecified for change (they lack a scale altogether) and thus involve the lowest or no degree of affectedness. His examples for the predicates in question are given in (22).

(22) a. Quantized change: *break, shatter, destroy, devour x*

b. Non-quantized change: degree achievement, e.g. *widen, cool, lengthen, cut, slice x*

c. Potential for change: *wipe, scrub, rub, punch, hit, kick, slap x*

d. Unspecified for change: *see, laugh at, smell, follow, ponder, ogle x*

As diagnostics for these properties he discusses the following. First, only his 'quantized' predicates behave like telic predicates. Second, the entailment that the theme underwent some change is only found with quantized and non-quantized predicates, but not with the others. Third, only quantized, non-quantized, and some predicates specified for potential change take result phrases. Fourth, paraphrases with 'happened/did to $x$' are available only with predicates specified for quantized, non-quantized, and potential change. Fifth, predicates specified for quantized, non-quantized, and potential for change, as well as some that are unspecified for change, are dynamic. Finally, there is a high variation of different resultatives added with those predicates that are specified for a potential for change, but low with those specified for quantized and non-quantized change.

While we do not want to make any theoretical claims about what affectedness is, we merely use the German counterparts to the English examples discussed by Beavers to see how they fare with respect to the availability of the 'degree' reading of WELL. First, in (23), we see that the counterparts to his 'quantized' predicates can have both a 'degree' and a manner reading.

(23) a. Die Vase ist gut  zersplittert.           'DEGREE'/MANNER
the  vase  is  well shattered

b. Das Gebäude ist gut  zerstört.
the  building  is  well destroyed

Beavers also counts verbs of breaking under this category. However, confirming our hunch from the previous section about the necessary potential lack of agentivity, we see that uses of *break* that do not have inchoative variants also do not allow for the degree reading (24).

(24)   Das Brot  ist gut  gebrochen.                          ONLY MANNER
       the  bread  is  well broken


Beavers posits non-quantized change in particular for degree achievements.  In (25) we see that
also these allow for both readings.


(25)   a. Der Wein ist gut  gekühlt.                       'DEGREE'/MANNER
          the  wine  is  well cooled

       b. Die Hose    ist gut  gekürzt.
          the  trousers is  well shortened


In addition, he posits non-quantized change also for verbs of cutting.  In (26), we see that such
verbs only allow for the manner reading of WELL, whether they are prefixed or not.  This could
again be due to the fact that they also cannot lack external arguments (e.g. they do not have an
inchoative version).


(26)   a. Das Holz  ist gut  geschnitten.                    ONLY MANNER
          the  wood is  well cut

       b. Das Band   ist gut  durchgeschnitten.
          the  ribbon is  well THROUGH-cut


Third, predicates with a potential for change only allow for the manner reading of WELL (27).


(27)   Der Tisch ist gut   gewischt.
       the  table is  well wiped


Finally, verbs that are unspecified for change do not form adjectival passives and are thus unac-
ceptable with or without WELL in the adjectival passive (28a), (29a).  In verbal constructions, in
turn, combinations of these verbs with WELL express something like a good degree of V-ability
(28b), (29b).


(28)   a. *Die Frau    ist (gut) gesehen.
          the   woman is  well  seen

       b. Hans hat die Frau    gut  gesehen.
          John  has the woman well seen
          'The woman was well visible to John.'

(29)  a.  *Die Blume ist (gut) gerochen.
          the   flower is  well smelled

      b.  Hans hat die Blume gut   gerochen.
          John  has the flower well smelled
          'John could smell the flower well.'

We do not have an explanation for this additional modal component with these predicates and have to leave it for future research. What these data show, then, is that a high degree of affectedness may be a necessary but not a sufficient condition for the 'degree' reading of WELL to arise.

## 3.4. Summary

In sum, whether or not we get a 'degree' reading of WELL depends entirely on the nature of the event denoted by the (underlying) verb and we do not have to posit scale structure conditions as those found in the adjectival domain. Thus, 'degree' WELL is an adverbial modifier in the verbal domain, not an adjectival degree modifier. Our preliminary empirical results suggest that there are three necessary but not sufficient conditions for the 'degree' reading to arise: stativity, potential lack of agentivity, high degree of affectedness.

Let us then turn to different possibilities for how to account for the two readings of WELL in the verbal domain.

## 4. Towards a proposal

The general idea of our proposal is that both manner and 'degree' WELL involve event modifying WELL and that the difference between them results from the different kinds of events that are modified (for an extension to Catalan intensifying WELL see Castroviejo and Gehrke, 2015). The adverb WELL is a VP modifier that has the same lexical semantics as the underlying adjective *good* (approval by some judge) (inspired by the prose in McNally and Kennedy, 2013). We follow the degree approach to gradable adjectives (e.g. Kennedy and McNally, 2005) and treat **good** as a measure function, which maps individuals to degrees on a scale (30a). Combining this with the standard treatment of manner modifiers (= VP modifiers) as predicates of events (e.g. Parsons, 1990), we get the semantics of WELL in (30b).

(30)  a.  $[\![good]\!] = \lambda d.\lambda x[\mathbf{good}(x) \geq d]$
      b.  $[\![well]\!] = \lambda d.\lambda e[\mathbf{good}(e) \geq d]$

In the absence of additional degree morphology, $d$ gets bound by POS, which determines the standard with respect to some comparison class, as commonly assumed in degree approaches to grad-

ability; we will abstract away from this in the following.

The manner reading of WELL is available with all verbs that allow for manner modification. These are usually all verbs that have an activity/process component, whereas many stative verbs do not allow manner modification, as noted in §3. Nevertheless we assume that also states have an event argument and that the reduced availability of manner modification with states is due to their being conceptually poorer; see, e.g., Mittwoch (2005); Geuder (2006).

There are different options for how to account for the 'degree' reading, and none of these is fully satisfactory as we will see in the following. Adverbs with a similar reading have been discussed in the literature under different labels. For example, Eckardt (1998) subsumes WELL under her 'degree-of-perfection' adverbs, which also include adverbs like *perfectly, beautifully, badly* (31) (from Eckardt, 1998, 160).

(31)   a.  Olga spielte die Sonate perfekt.
           Olga played the sonata  perfectly
           'Olga played the sonata perfectly.'
       b.  Paul hat den Handstand mittelgut    ausgeführt.
           Paul has the  handstand  middle-well executed
           'Paul executed the handstand sub optimally.'
       c.  Tim baute das Zelt schlampig auf.
           Tim built  the tent sloppily    up
           'Tim built the tent sloppily.'

Schäfer (2005) argues, very much like us, that these are a special case of manner adverbs, whereas Piñón (2008) suggests that these are possibly semantic blends of manner and result.

Adverbs like *beautifully, heavily*, and *elegantly*, which are labeled 'resultative' (Geuder, 2000) or 'result-oriented' (Eckardt, 2003), also have similar readings (32) (from Geuder, 2000, 69).

(32)   a.  They decorated the room beautifully.
       b.  She dressed elegantly.
       c.  They loaded the cart heavily.

Geuder (2000) discusses three different analyses of such adverbs, which all treat them as predicates of events. First, they could involve the modification of the event in the telic quale of the verb (Pustejovsky, 1995), second they could involve result state modification (e.g. Parsons, 1990), and third, they could involve some kind of predicate transfer (in the sense of Nunberg, 1995), a proposal that Geuder (2000) opts for in the end. We have already seen an implementation of the first type

when we addressed the proposal by McNally and Kennedy (2013), so in the following, we will only discuss the other two types of analyses. We will see that both face some problems and end up with proposing an unfortunately weaker account in terms of underspecification.

4.1. The event decomposition option

We could follow a common implementation of event decomposition in terms of VP shells. When WELL modifies a VP that is associated with an activity/CAUSE we get a manner reading. When WELL modifies a VP that is associated with a (result) state, we get the 'degree' reading. Note that empirically this could be a syntactic implementation of McNally and Kennedy's (2013) account in terms of modification of different qualia, which we outlined in §2. For example, Parsons's (1990) analysis of 'open wide' is given in (33), and we could employ a similar account for 'degree' WELL.

(33)  $(\exists e)[\mathbf{Cul}(e) \wedge \mathbf{Agent}(e, x) \wedge (\exists e')[\mathbf{Cul}(e') \wedge \mathbf{Theme}(e', y) \wedge \mathrm{CAUSE}(e, e') \wedge (\exists s)[\mathbf{open}(s) \wedge$
      $\mathbf{Theme}(s, y) \wedge \mathbf{Hold}(s) \wedge \mathrm{BECOME}(e', s) \wedge \mathbf{Being\text{-}wide}(s)]]]$

A possible argument for this account goes as follows. Eckardt (2003) shows that in verb-final clauses, German result-oriented adverbs have to appear after the direct object (34), whereas manner adverbs can appear either before or after the direct object.

(34)  ... (dass) Hans {*schwer} den/einen Wagen  {schwer} belud.
          that)  Hans heavily    the/a     carriage heavily  AT-loaded
      '... (that) Hans loaded the carriage heavily.'

German WELL, then, gets the 'degree' reading only in the lower position (35), which suggests that there is a structural difference between the two readings of WELL.

(35)  a.  ... (dass) Hans gut  den/einen Wagen  belud.              ONLY MANNER
              that)   Hans well the/a      carriage AT-loaded
          '... (that) Hans loaded the carriage well.'
      b.  ... (dass) Hans den/einen Wagen  gut  belud.              'DEGREE'/MANNER
              that)   Hans the/a      carriage well AT-loaded
          '... (that) Hans loaded the carriage well.'

However, a problem for the event decomposition option is that clear cases of bi-eventives, such as *open* (cause $x$ to become open) or *kill* (cause $x$ to become dead) only allow for the manner reading

(recall (11b)/(16a) and (18a)). In the latter case, we could still wonder whether this is due to the fact that the causative/agentive component of a verb cannot be left out, but this cannot be the reason for *open*. On the other hand, we could ask then, whether this is just another point that shows that verbs like *kill* should not be decomposed in the syntax? However, then it is not clear why other adverbs, such as *again* (e.g. von Stechow, 1996), can access result states with such verbs as long as they have reversible result states, as in the case of *open*. All these considerations shed serious doubt on the event decomposition approach to 'degree' WELL.

4.2. The predicate transfer option

Under Geuder's (2000) treatment of resultative adverbs as event modifiers, the verbs which allow such readings are argued to have resultant individuals as implicit (semantic but not syntactic) arguments, as paraphrased in (36).

(36)  a. They decorated the room beautifully. → beautiful decoration
      b. She dressed elegantly. → elegant dress
      c. They loaded the cart heavily. → heavy load
      d. She wrapped the gift nicely. → nice wrapping

For example, his lexical entry of *load* is given in (37). By predicate transfer, instances of event modification, such as those in (36), are turned into indirect modification of resultant individuals.

(37)  a. Semantic arguments: AGENT, THEME, LOCATION, RES(ultant)-I(ndividual)
         $load(e)(a, x, y, r)$
      b. Lexical entailments:
         → $a$ CAUSE (BECOME (AT $(x, f_{\text{LOC}}(y))$))
         & $R(r, y)$, such that
         - it presupposes BECOME (AT $(x, f_{\text{LOC}}(y))$)
         - $y$ specifies a function for $r$ [roughly: "transport"]
         & CONSTITUTE$(x, r)$ [here: $r$ is a collective object with $x$-individuals as parts]

A problem for adopting this account for our purposes is that the 'degree' reading of WELL does not arise in the same environments as the result reading of other adverbs does. For example, in (38a), we might get something like a 'degree' reading (all these verbs are also prefixed), but in (38b) we definitely only get a manner reading (and none of these verbs are prefixed).[4]

---

[4]Unlike the other data reported in this paper, these data have not been checked with other native speakers but only reflect the already shaky judgments of one of the authors, which is why we opted for adding question marks behind the labels ('DEG'/)MANNER.

(38) a. gut  beladen/verpackt/eingewickelt                          'DEGREE'/MANNER?
        well AT-loaded/PREF-packed/IN-wrapped

     b. gut  geschmückt/gekleidet                                    ONLY MANNER?
        well decorated/dressed

On the other hand, the respective paraphrases with nominalizations might still hold (39).

(39) a. gut  beladen/verpackt        → gute  Ladung/Verpackung
        well AT-loaded/PREF-packed      good load/packaging

     b. gut  geschmückt/gekleidet → guter Schmuck/gutes  Kleid
        well decorated/dressed        good decoration/good dress

So we might still be dealing with implicit arguments that are modified by predicate transfer, only we do not always get a 'degree' reading. But then we have not accounted for the restrictions on the 'degree' reading either, other than observing for these six verbs that there is also a difference whether or not they are prefixed; from previous examples we see that a prefix is not a necessary condition for the 'degree' reading to arise, though. Faced with these problems, we discard also this account and opt for a weaker one in terms of underspecification, as outlined in the following.

## 4.3. The underspecification option

One possible way to implement an underspecification account is to posit that context fills in the additional information that is not specified and thus determines which reading we are dealing with. However, this can clearly not be right for our cases, since the restrictions have to do with the lexical semantics of the verbs involved and context does not seem to play a role. Nevertheless, we opt for an underspecification account to remain agnostic as to the precise implementation of the restrictions on 'degree' WELL.

For an implementation in terms of underspecification, we follow Schäfer (2008), who builds on Eckardt's (1998) notion of a 'big event' $e^*$, a complex event consisting of smaller event objects (introduced by the **PART_OF**-relation). Abstracting away from the degree argument and from Tense, **good**, then, accesses either the big event or part of the event, as illustrated for (14a) in (40).

(40)  $\exists e^*, x[\mathbf{subject}(x, e^*) \wedge \mathbf{object}(\mathbf{the\text{-}cart}, e^*) \wedge \exists e[\mathbf{PART\_OF}(e, e^*) \wedge \mathbf{load}(e) \wedge \mathbf{good}(e/e^*)]]$

If it accesses the big event, we get the manner reading, but if it accesses just part of the event, a 'degree' reading is possible. Alternatively, we could always have it modify part of the event, and then it is underspecified as to which part exactly (the process or the result).

## 5. Conclusion

We have elaborated on and qualified McNally and Kennedy's (2013) claim that 'degree' WELL is an event modifier by examining its distribution in (English and) German. We argue that both manner and 'degree' readings of WELL share a common semantic core: the measure function **good** is applied to an event. We have shown that the 'degree' reading arises when WELL applies to a (result) state of a non-agentive event that selects a highly affected argument, and we sketched different options of how to formally account for this reading, none of which were fully satisfactory.

## References

Beavers, J. (2011). On affectedness. *Natural Language and Linguistic Theory 29*, 335–370.

Bolinger, D. (1972). *Degree Words*. The Hague: Mouton.

Bruening, B. (2014). Word formation is syntactic: Adjectival passives in English. *Natural Language and Linguistic Theory 32.2*, 363–422.

Castroviejo, E. and B. Gehrke (2015). A GOOD intensifier. In T. Murata, K. Mineshima, and D. Bekki (Eds.), *New Frontiers in Artificial Intelligence (JSAI-isAI 2014 Workshops, LENLS, JURISIN, and GABA, Kanagawa, Japan, October 27-28, 2014, Revised Selected Papers)*, Lecture Notes in Computer Science, pp. 114–129. Dordrecht: Springer.

Caudal, P. and D. Nicolas (2005). Types of degrees and types of event structures. In C. Maienborn and A. Wöllstein (Eds.), *Event Arguments: Foundations and Applications*, pp. 277–300. Tübingen: Niemeyer.

Eckardt, R. (1998). *Adverbs, Events, and Other Things: Issues in the Semantics of Manner Adverbs*. Tübingen: Max Niemeyer Verlag.

Eckardt, R. (2003). Manner adverbs and information structure: Evidence from the adverbial modification of verbs of creation. In E. Lang, C. Maienborn, and C. Fabricius-Hansen (Eds.), *Modifying Adjuncts*, pp. 261–306. Berlin: de Gruyter.

Gehrke, B. (2015). Adjectival participles, event kind modification and pseudo-incorporation. *Natural Language and Linguistic Theory 33.3*, 897–938.

Geuder, W. (2000). *Oriented Adverbs: Issues in the Lexical Semantics of Event Adverbs*. Ph. D. thesis, University of Tübingen.

Geuder, W. (2006). Manner modification of states. In C. Ebert and C. Endriss (Eds.), *Proceedings of Sinn und Bedeutung 10*, pp. 111–124. Berlin: ZAS.

González-Rivera, M. and J. Gutiérrez-Rexach (2012). On the syntax and semantics of extreme-degree modifiers in Puerto Rican Spanish. Paper presented at LSRL 42, Southern Utah University.

González-Rodríguez, R. (2006). Negación y cuantificación de grado. In M. Villayandre (Ed.), *Actas del XXXV Simposio Internacional de la Sociedad Española de Lingüística*, pp. 853–871. León: Universidad de León.

Hernanz, M. (2010). Assertive 'bien' in Spanish and the left periphery. In P. Beninca and N. Munaro (Eds.), *Mapping the Left Periphery: The Cartography of Syntactic Structures*, pp. 19–62. Oxford University Press.

Katz, G. (2003). Event arguments, adverb selection, and the Stative Adverb Gap. In E. Lang, C. Maienborn, and C. Fabricius-Hansen (Eds.), *Modifying Adjuncts*, pp. 455–474. Berlin: de Gruyter.

Kennedy, C. (2012). The composition of incremental change. In V. Demonte and L. McNally (Eds.), *Telicity, Change, State: A Cross-Categorial View of Event Structure*, pp. 103–121. Oxford: Oxford University Press.

Kennedy, C. and L. McNally (1999). Degree modification in deverbal adjectives. In T. Matthews and D. Strolovitch (Eds.), *Proceedings of SALT 9*, pp. 163–180. Ithaca, NY: CLC Publications.

Kennedy, C. and L. McNally (2005). Scale structure and the semantic typology of gradable predicates. *Language 81.2*, 345–381.

Kratzer, A. (2000). Building statives. Ms. University of Massachusetts at Amherst.

Maienborn, C. (2005). On the limits of the Davidsonian approach: The case of copula sentences. *Theoretical Linguistics 31.3*, 275–316.

McIntyre, A. (2013). Adjectival passives and adjectival participles in English. In A. Alexiadou and F. Schäfer (Eds.), *Non-Canonical Passives*, pp. 21–42. Amsterdam: John Benjamins.

McNally, L. and C. Kennedy (2013). Degree vs. manner *well*: A case study in selective binding. In J. Pustejovsky, P. Bouillon, H. Isahara, K. Kanzaki, and C. Lee (Eds.), *Advances in Generative Lexicon Theory*, Text, Speech and Language Technology, vol. 46, pp. 247–262. Dordrecht: Springer.

Mittwoch, A. (2005). Do states have a Davidsonian argument? Some empirical considerations. In C. Maienborn and A. Wöllstein (Eds.), *Event Arguments: Foundations and Applications*, pp. 69–88. Tübingen: Niemeyer.

Nunberg, G. (1995). Transfers of meaning. *Journal of Semantics 12*, 109–132.

Parsons, T. (1990). *Events in the Semantics of English: A Study in Subatomic Semantics*. Current Studies in Linguistics Series 19. Cambridge, MA: MIT Press.

Piñón, C. J. (2008). Illegibly. Paper presented at '8. Ereignissemantik-Workshop', IDS, Mannheim, December 2008.

Pustejovsky, J. (1995). *The Generative Lexicon*. Cambridge: MIT Press.

Rappaport Hovav, M. and B. Levin (2010). Reflections on manner/result complementarity. In E. Doron, M. Rappaport Hovav, and I. Sichel (Eds.), *Syntax, Lexical Semantics, and Event Structure*, pp. 21–38. Oxford: Oxford University Press.

Schäfer, M. (2005). *German Adverbial Adjectives: Syntactic Position and Semantic Interpretation*. Ph. D. thesis, University of Leipzig.

Schäfer, M. (2008). Resolving scope in manner modification. In O. Bonami and P. Cabredo Hofherr (Eds.), *Empirical Issues in Syntax and Semantics 7*, pp. 351–372. http://www.cssp.cnrs.fr/eiss7.

Siloni, T. (to appear). On the syntactic representation of events. In R. Truswell (Ed.), *Handbook on Event Structure*. Oxford: Oxford University Press.

von Stechow, A. (1996). The different readings of *wieder* 'again': A structural account. *Journal of Semantics 13*, 87–138.