This Is So NP!

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ABSTRACT: The construction we are discussing is a recent American English construction (though it can be found in a number of other languages as well) with an individual-denoting noun phrase (NP) in the predicate position modified by a degree modifier that typically occurs with gradable adjectives, as in 'This is so Obama!' We attempt to look deeper into the structure and compositional semantics of this construction, and though we do not provide a complete analysis of it, we believe that the study of this construction can contribute to questions of gradable predicate semantics, multidimensionality, degree constructions and proper name semantics.

1. THE CONSTRUCTION

Some examples of the construction we will be discussing are in (1–2) (examples from web):

(1)   a. Matching shirt and hat is so McDonalds. (≈cheap, unfashionable)

      b. Buying DVDs is so 2004! (≈out-of-date)

      c. Yeah, that is so Obama! (≈cool)

(2)   a. Ad: "How to dance at a club or party: An analytical approach"
         Comment: "This is so Google!"

      b. this is SO PARIS ! absolutely amazing ! (about a fashion show)

      c. I preferred rural France, Paris is so Paris.

      d. It is SO New York City in the 1970s! (about Buenos Aires)

      e. It is a masterpiece video. The way it's put together, it is so New York.

      f. My mom is so Berkley (a name of a Facebook group)

This construction is especially active and productive among young Americans (Barbara Partee, Muffy Siegel, p.c.). We believe this is a new or emerging construction in American English, though we have not conducted any quantitative studies to prove it. American English is certainly not the only language to exhibit this construction; it is also present in French, German, Icelandic, and probably in some more. There are languages that lack the construction altogether (Russian is an example). We will not give an explanation for this point of cross-linguistic variation here; what is important for us is just that this construction is not unique to English and is a widely cross-linguistic phenomenon. Thus we are not dealing with an accidental phenomenon.

The characteristic properties of the construction are: a) an individual-denoting noun phrase in the predicate position; b) a degree item combining with this NP. The interesting part about (a-b) is that this is a rather unexpected combination. We will look closer at exactly what kinds of NPs can occupy the predicate position with exactly which degree items next to them. This will allow us to both formulate and check hypotheses about the structure and compositional semantics of the construction. The particular aim of this paper is to take a closer look at one of the ways to arrive at a gradable predicate.

1.1. The degree environment

The striking property of the construction is the degree environment that the NP appears in. There is nothing particularly strange in a NP showing gradable behavior, see a recent discussion of 'gradable nouns' in Morzycki (2009a):

(3)   a. George is an enormous idiot!   (=1 Morzycki 2009a)

      b. Gladys is a big beer-drinker.

      c. Three huge goat-cheese enthusiasts were arguing in the corner.

    d. Most really colossal curling fans are difficult to understand.

Also, there is nothing strange in the very fact that expressions that seem individual-denoting at first sight (and in particular proper names) appear in a predicate position, though a closer look sometimes reveals that these expressions have some type other than *e*. An example is a naming construction analyzed as a small clause (Matushansky 2008):

(4)   a. Call me Al.   (=1 Matushansky 2008)

       b. In the end of the 20th century the city was renamed St. Petersburg.

       c. The St. Olga of the Orthodox Church was actually baptized Helen.

However, the degree environments an individual-denoting NP can appear in have never been described.

    The degree modifier most often seen in this construction is *so*, see (1–2). *So* has a number of uses including some that are very new and currently emerging and other more canonical uses when it modifies a gradable predicate:

(5)   a. It was so dark that I couldn't see anything.

       b. I so need your advice!

       c. She was so 'let them eat cake'.

       d. He was so 'live free or die' in his approach. . .

While (5a) exemplifies an 'ordinary' gradable adjective-modifying *so* in the canonical construction, (5b–d) show the whole spectrum of other uses and do not have an obvious analysis (we will discuss whether they belong to our construction later on).[1]

    The degree items participating in this construction are not limited to *so*. One can find a wide range of degree modifiers, comparative morphemes, degree exclamatives, dimension quantification etc.:

(6)   Modifiers:

       a. Matching shirt and hat is {so /pretty / very / so very / rather} McDonalds.

       b. Those shoes are {downright/positively/straight-up} 1994!

       Exclamative construction:

       c. How very Obama!

       Comparative construction:

       d. ?Those shoes seem more 1994 than any I've actually seen in 1994!

       Dimension quantification:

       e. These shoes are 1994 in every respect!

This suggests that the construction is not 'frozen' in the sense of not being decomposable into a degree element and a gradable item that tentatively introduces a degree variable for the degree element to manipulate over. In a case like this one would want to attempt a compositional account of the construction.

1.2. *The noun phrase*

This section explores the types of NPs that can appear in the construction. Interestingly, it includes almost only proper names, which are the most frequently seen NP type in this construction, as most of the above examples show. Is there ever anything else?

    As (5c–d) show, apparently there are other cases. The quotation cases (5c–d) can have a number of analyses and it is not obvious that these do not ultimately make reference to an individual of some sort. Other cases of non-individual denoting NPs in the construction would be generalized quantifiers, but they are ungrammatical here according to most speakers' judgments:

(7)   a. ∗It's so every genius.

       b. ∗This is so some bachelor.

However, as an anonymous reviewer points out, one can construct an example where a generalized quantifier would not be so bad as in (7), for example:

(8)   ?This kind of macho posturing is so every Sylvester Stallone movie ever made.

It is rather hard to make a generalization here, the only one being that the construction is perfect with proper names, and the judgments for

other cases vary a lot. How to account for the fact that the construction is tailor-made for proper names and the rest is unclear?

One might argue for conventionalization of a property associated with a particular well-known individual. I.e., *McDonalds* might come to have the conventional meaning 'cheap'.

We suggest that this is probably not the case; the meaning is most likely derived on the go.

The reason is twofold: first, an individual whose name participates in this construction need not be a famous one. One could argue for a change of lexical meaning in the case of McDonalds or Obama, or even maybe in the case of year numbers (1994, 2004) being remembered for a certain state of affairs by everyone speaking a certain language, but it is hardly the case with Harvey, whose distinguishing properties are not part of the whole English speaking community's background knowledge:

(9)   That's so Harvey! (both the speaker and the hearer know
        Harvey to be charming but ineffectual)
                                (example from Muffy Siegel, p.c.)

The second argument against the 'lexical' view is the fact that branching of these NPs is possible in the construction in an absolutely ordinary and productive way parallel to the way proper names are modified elsewhere, compare (2d) repeated here, (10) and (11):

(2d)   It is SO New York City in the 1970s! (about Buenos Aires)

(10)   This is so [Madonna at Golden Globes (when she won for Evita)]!

(11)   [The Paris of the forties] was not a nice place to be.
            (=89 Matushansky 2008)

It seems that in these cases, too, the NP in the predicate position needs a proper name as its head. Other apparent counterexamples include year references (1b and 6b repeated):

(1b)   Buying DVDs is so 2004! (≈out-of-date)

(6b)   Those shoes are {downright/positively/straight-up} 1994!

A solution one might adopt for these cases would be analyzing 1994 and the like as a variety of proper names.

Thus we conclude that the construction we are dealing with is prominently (though probably not exclusively) available for proper names as a head of the predicate NP. On the other hand, we believe that the construction does not involve a change in the lexicon; rather one should look for a compositional account of the semantics of the construction using the same semantics for proper names as elsewhere.

2.   SYNTACTIC PROPERTIES: IS IT AN AP?

So far we have been referring to the predicate in our construction as a noun phrase. Nevertheless, the outer syntax of this constituent requires further investigation. We would like to check the possibility that this is an adjective phrase (AP).

We will run some tests using several classic diagnostic criteria to identify APs. The tests will not be conclusive, which is a disappointing result, the consequences of which we discuss at the end of the section.

There is a distinction already mentioned above between APs and NPs showing gradable behavior with respect to the sets of degree modifiers that can be used with them (Wasow 1977, 1980):

(12)   a. George is a(n) enormous/big/slight/minor/∗so/#pretty/∗very/∗so
           very/∗rather idiot.
        b. Matching shirt and hat is
           {∗enormous/∗big/∗huge/∗slight/∗minor/so/pretty/very/so
           very/rather} {McDonalds/cheap}.

Only adjectives and not nouns can appear in *how*-exclamatives:

(13)   How very {Obama/∗idiot/cool/cheap}!

The 'strict subcategorization' test (also known as the *seem*-test) is concerned with the complements of 'linking' verbs such as *seem, feel, become* etc. They are usually thought of as selecting for APs only:

(14)   He {is/seems/felt/became} so {Obama / ∗idiot}!

The coordination test is based on the assumption that coordination applies to constituents with the same label only (Dik 1968, Peterson 1991):

(15)   The martini always seems so James Bond, so "Sex in the City,"
        so elegant.

The tests we have been running unambiguously group the predicate 'NP' with APs rather than with NPs. Their internal structure is that of NPs with a proper name as a head but externally they act like APs.

It turns out, however, that all of the above tests are semantic rather than syntactic in nature, see the discussion in (Maling 1983, Matushansky 2002). The observed distinctions in fact cut across syntactic categories—it does not matter what syntactic label the constituent has as long as it satisfies a certain semantic requirement.

The seem-test proves not to test for adjectivity:

(16)   They seemed {so / too / very} {in love / at home / out of
        shape}
        (Maling 1983)

(17)   a. Lee sure seems {∗out of the house / out of his mind}

        b. Robin seems {a fool / ∗prime-minister}

        c. {Lee / ∗The square root of two} seems irrational

        d. The problem seems insoluble/∗mathematical
           (Bresnan 1973)

Matushansky (2002) concludes that "the complement (of a linking verb—E.B.) must contain a DegP [. . .] Scalar APs, DPs and PPs can always appear there."

The same holds for exclamatives and coordination:

(18)   a. How out of shape Lee looked!

        b. ∗How at the railroad crossing they lived!

(19)   The surgeon operated slowly and with great care

Scalarity coercion can save sentences like (17d), which does not contradict the observation that the complement has to be scalar:

(20)   The problem seems pretty much mathematical.

The non-semantic tests for adjectivity can be either morphological or syntactic. The proper names clearly and unsurprisingly do not pass the morphological tests—synthetic comparatives and superlatives, the *un*-prefix (Siegel 1977): ∗*Britneyer*, ∗*Britneyest*, ∗*un-McDonalds* etc.

The syntactic tests include the possibility of occupying prenominal position and the *enough*-shift (Bresnan 1973, Maling 1983).

The prenominal position is out:

(21)   a. ∗These very McDonalds french fries..

        b. ∗Those very 1994 shoes of yours..

The *enough*-shift test is based on the fact that enough can never precede an adjective. This test gives more or less the same result as the test for prenominal position:

(22)   Robin seems {∗enough sensible / sensible enough}

(23)   These french fries are {?enough McDonalds / ??McDonalds enough}
        (for me)

For some reason it is rather hard to get consistent speakers' judgments for (23), but an observation is that even though both variants might be judged as not perfect, the preceding *enough* is better.

What conclusion can one draw from the facts that we discuss in this section? Is the predicate in this construction an AP or an NP after all? The evidence seems ambivalent. The question boils down to whether we need to assume an AP layer whenever we see an adjective-like degree behavior and whether we can check for the actual presence of the AP layer in the structure in any conclusive way rather than for semantic features usually associated with gradable adjectives. We believe this to be a deep question that goes beyond the scope of this paper, though this particular construction allows us to see the problem more clearly. We would like to end up saying that it is a DegP of a certain kind that is semantically close to DegPs that have a gradable adjective inside, whatever semantic property distinguishes DegPs containing an adjective from other DegPs. The exact DegP semantics would depend on the particular implementation of gradability, cf. (Kennedy & McNally 2005, Rett 2008, Kennedy 1999, 2007; and Neeleman et al. 2004) a.m.o. We will return to this discussion later on.

3.   SEMANTICS: THE VERY FIRST ATTEMPT

Picking the name for the construction, we chose 'gradable individuals', though, as a reviewer pointed out, it commits us to a certain view of the phenomenon that we might not want to commit ourselves to. We would love to keep the name though, at least as a shorthand for the construction that we are discussing, without taking too seriously what the term implies.

The straightforward way to talk about the semantics of the construction and how the gradability comes about might be the following. First, as we are intuitively dealing with the properties of the individual the proper name refers to, one might assume a familiar type-shift from individual type e to sets of properties of e (< et,t>), cf. (Partee 1986). As a second step, one of the properties in the set gets picked—the most salient one, probably. Thus one ends with a single property that is being referred to by a proper name. As an example, this is how it would work with Harvey:

(24)   The first attempt

        a. e →<et,t>   (Harvey → polite, smart, 1.80m tall, blond, 35yo
           etc.)

        b. <et,t> → et   (polite, smart, 1.80m tall, blond, 35yo etc. →smart)

        c. $[[Harvey]] = \lambda x \lambda d.\mathbf{smart}(x) > d$

The picture in (24) looks rather plausible, but there are objections to it.

First, if a shift from *e* to sets of properties were needed and actually took place, why don't we get generalized quantifiers in this position, as in (7) repeated here (Barbara Partee, p.c.):

(7)   a. *It's so every genius.

   b. *This is so some bachelor.

Second, it is not clear how one of the properties gets picked from the set that results from the shift in (24a). This problem is worth discussing in greater detail. Good candidates are properties that have the individual very high on the scale associated with the property. At least the individual should exceed a standard of, say, *smart* and count as smart.

(25) #That's so Harvey! (meaning 'smart' and assuming the degree of Harvey's smartness isn't particularly high)

Intuitively, the property gets picked precisely because the individual referred to possesses this property to a significantly high extent, and probably to the highest extent compared to all the other (conversationally active) individuals, so that the individual in question serves as some kind of maximum relative to all other available candidates. The idea of a maximum, imposed on a scale by the individual, does get some support from degree modifier distribution:

(26)   a. Those shoes are {totally/absolutely/perfectly} {1994/clean}.

        b. That's totally {Einstein/accurate}!

        c. ??That's totally/absolutely/perfectly {old/smart}.

We interpret the contrasts in (26) along the line of scale structure diagnostics developed in Kennedy & McNally (2005) (similar observations are made independently in Rothstein & Winter (2004)). We assume scale structure typology as described in these works: scales (sets of degrees totally ordered with respect to some dimension) can be (totally) open, lower closed, upper closed and totally closed. In addition, we assume the existence of 'extreme adjectives' as described in (Morzycki 2009b)—with the standard higher on the scale than any contextually salient degrees. We discuss extreme adjectives in more detail below, concentrating on the four-way distinction from (Kennedy & McNally 2005), schematically shown in (27):

(27)
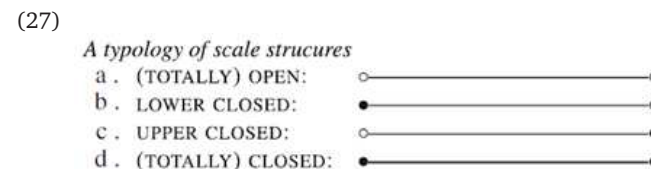
The distinctions in (27) are reflected in degree modification patterns of different adjectives, which can be exemplified by distribution of, say, *slightly* and *perfectly* that target a scalar minimum and a scalar maximum, respectively:

(28)   Open scales   (=62-65 Kennedy & McNally 2005)

        a. ??perfectly/??slightly {tall, deep, expensive, likely}

        b. ??perfectly/??slightly {short, shallow, inexpensive, unlikely}

(29)   Lower closed scales

        a. ??perfectly/slightly {bent, bumpy, dirty, worried}

        b. perfectly/??slightly {straight, flat, clean, unworried}

(30)   Upper closed scales

        a. perfectly/??slightly {certain, safe, pure, accurate}

b. ??perfectly/slightly {uncertain, dangerous, impure, inaccurate}

(31)   Closed scales

a. perfectly/slightly {full, open, opaque}

b. perfectly/slightly {empty, closed, transparent}

(26) classifies proper names in our construction together with gradable predicates with upper closed scales (*certain, safe, pure, accurate; straight, flat, clean, unworried*), even in cases when the property associated with the individual is open scale (cf. 25c).

Thus the hypothesis at this point is that there is a function taking an individual as its input, and returning a gradable property such that the input individual has the highest degree with respect to this property compared to all other (contextually salient) individuals. There might in principle be more than one such property for each individual (one might be extraordinarily tall as well as an extraordinarily good cook)—in such a case an element of this set might be determined by some contextual prominence. The side effect on the scale structure is that the individual sets an upper boundary on the scale that acts as a degree standard. Thus the adjective *Einstein* is an upper-closed scale gradable predicate, with Einstein as a maximal standard with respect to smartness.

4.   EXTREME INDIVIDUALS

There are complications to the picture sketched in section 3. Consider the following example:

(32)   a. Those shoes are {downright/positively/straight-up} 1994!

b. These cookies are {flat-out/downright} St. John! (St. John being a good restaurant)

c. ??{downright/positively/straight-up} {safe/pure}.

This pattern is quite different from (26) and shows similarity between 'gradable individuals' and the 'extreme adjectives' described in Morzycki (2009b).

Extreme adjectives include, for example, the following: *fantastic, wonderful, fabulous, gorgeous, resplendent, magnificent, glorious, sumptuous, spectacular, outstanding, tremendous, huge, gigantic, ginormous*.

There is a distinct set of degree modifiers that exclusively combine with extreme adjectives. Some of the extreme degree modifiers: *simply, just, positively, absolutely, flat-out, full-on, out-and-out, downright, outright, straight-up, balls-out*.

Morzycki's account uses a contextual domain restriction variable *C* (von Fintel 1994) that was originally designed to pick a contextually salient subset of individuals to quantify over:

(33)   a. Everyone$_C$ had a good time.

b. $\forall x[[\ x \in C \ \& \ x$ is a person$] \rightarrow x$ had a good time $]$

The idea Morzycki develops is that maybe contextual restriction happens in other domains as well, namely, in the domain of *degrees*. Then the denotations for gradable adjectives would look more or less like in (34):

(34)   a. $[[big_C]] = \lambda x \lambda d.\ x \in C \ \& \ x$ is d-big   (= 49 Morzycki 2009b)

b. $[[gigantic_C]] = \lambda x \lambda d.\ d > \max(C) \ \& \ x$ is d-big   (= 51 Morzycki 2009b)

Then Einstein in (26b) can have interpretation along the lines of (35):

(35) $[[Einstein]] = \lambda x \lambda d.\ d > \max(C) \ \& \ x$ is d-smart

The 'extremeness' of gradable individuals might help explain the fact that they are not that good in comparative constructions (though not completely ungrammatical):

(36)   a. ?Those shoes seem more 1994 than any I've actually seen in 1994!

b. ?She is more Audrey Hepburn than any of the girls I've met.

c. ?His term paper isn't as Einstein as I expected it to be.

(37)   a. ?Godzilla is more gigantic than Mothra.   (= 10 Morzycki 2009b)

b. ?Monkeys are less marvelous than ferrets.

c. ?Everything is more scrumptious than natto.

Alarmingly, 'gradable individuals' can be modified by *very*, cf. *very 1994* vs. ∗*very gigantic*, but in this respect they pattern with 'contextual extreme adjectives' like *brilliant, certain, obvious* etc., a class also described in (Morzycki 2009b).

The difference between the readings that we discussed ('upper-closed scale' and 'extreme' readings) basically boils down to the position of the individual on the relevant scale with respect to the contextual restriction:

(38)
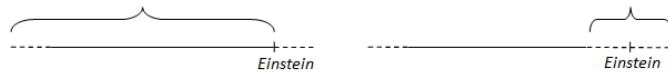
With all this in mind, one can try to formalize these meanings as follows:

(39)   a. $[[Godzilla]] = [[big_C]] = \lambda x \lambda d.\ x \in C$ & x is d-big

        b. $[[Godzilla]] = [[gigantic_C]] = \lambda x \lambda d.\ d > \max(C)$ & x is d-big

The fact that this 'exceptional' or 'extreme' reading is active with gradable individuals is parallel to an observation made in Matushansky (2002) that when a non-gradable predicate undergoes scalarity coercion, it can receive an 'outstanding' interpretation in environments where other gradable predicates don't:

(40)   a. John is quite a fool.

        b. William is quite a doctor!   (an outstanding doctor rather than a typical one)

Thus the 'gradable individuals' we are looking at seem to belong to the 'extreme' scalar type. The 'upper-closed scale' reading and the 'extreme' reading are distinct from each other but it is not absolutely clear what the relation between them is. They seem to co-exist, at least in English, their difference from each other being the source of disagreements between the speakers on some of the judgments discussed in the present paper. In any case, it is still unclear what property exactly they denote.

5.   INDIVIDUALS AS PROTOTYPES

It is not always easy to identify the exact single property the proper name denotes in this construction:

(41)   a. Her hair is so Madonna at Golden Globes! (curly? big? combination of both?)

        b. That's so Harvey! (Harvey being very clumsy and charming)

'Gradable individuals' are reminiscent of concepts with prototypes (Kamp & Partee 1995, Osherson & Smith 1981): we measure "similarity to the concept's 'best' exemplar" (Osherson & Smith 1981: 35) with respect to a number of parameters, or 'dimensions'.

Intuitively, properties of the 'gradable individual' serve as dimensions, and the individual gets interpreted as a multidimensional gradable predicate. We will use a vector space metaphor for illustration—a device often used for various tasks in linguistics, see Vector Space Semantics (Zwarts 1997, Winter 2001) or word sense disambiguation (Schütze 1998).

Suppose there is some subset of the set of individual's properties that serve as parameters of comparison to calculate the resemblance measure. The number of these properties determines the number of dimensions in properties space. So each individual has a corresponding point/vector in this space that is determined by the individual's position on the space scales. Thus the vectors can be mapped to a scale that would order individuals by a selected measure. In figure (42) there is a two-dimensional space with individuals *McDonalds*, *x*, and *y* represented as vectors and a corresponding scale. We can hypothe-

(42)
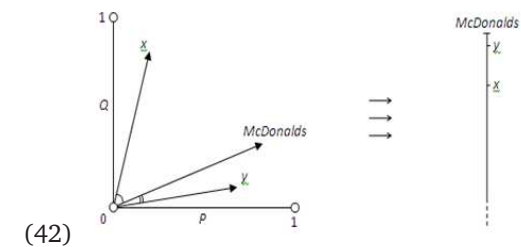
size that the difference between the upper-closed scale (we might call that the 'resemblance') meaning and the 'extreme' meaning lies in the nature of a measure that maps individuals to the resulting scale. It might be the case that for an extreme reading to arise, the length of vectors should be mapped to degrees on a corresponding scale; for a

resemblance reading, some distance measure (say, Euclidian distance) should be mapped to degrees on a corresponding scale. Thus the resemblance meaning is a naturally upper-closed scale, and the extreme reading naturally arises when the individual is really prominent with respect to the properties one picks as characteristic for it - then its vector length is going to be extremely long.

We schematically formulate the two readings in (42):

(42) a. $[[McDonald's_C]] = \lambda x \lambda d. \in C$ & x is d-$(\{(|v(McDonald's) - v(x)|): x \in D_e \})$

    b. $[[McDonald's_C]] = \lambda x \lambda d. > \max(C)$ & x is d-$(\{(|v(McDonald's)| - |v(x)|): x \in D_e \})$

In (42a), $\{(|v(McDonald's) - v(x)|): x \in D_e \}$ stands for a scale constructed with respect to Euclidian distance between vector pairs formed by *McDonald's* and all other individuals (the same ordering could be achieved by *cosine* metrics), which gives the resemblance meaning; in (42b), $\{(|v(McDonald's)| - |v(x)|): x \in D_e \}$ stands for a scale constructed with respect to difference in magnitude of vector pairs formed the same way, with the extreme reading as a result.

So far it is still unclear though how this picture improves on our first attempt with multiple type-shifting formulated in (24):

(24) The first attempt

    a. e $\rightarrow$ <et,t> (Harvey $\rightarrow$ polite, smart, 1.80m tall, blond, 35yo etc.)

    b. <et,t> $\rightarrow$ et (polite, smart, 1.80m tall, blond, 35yo etc. $\rightarrow$ smart)

    c. $[[Harvey]] = \lambda x \lambda d.\mathbf{smart}(x) > d$

The role of the set of properties that result from the first shift becomes more clear when we think about them as dimensions, but what does it mean in terms of types and compositional derivation?

6. THE DIMENSIONS

Sassoon (in prep.) analyzes different ways in which multidimensional predicates incorporate dimensions and also differences in the way that nouns and adjectives do this.

Nouns like *bird* are associated with multiple dimensions (characteristic features) which are incorporated through mean operations at an early processing stage. Thus, for an entity to be classified under a noun, its mean degree in the dimensions of the category (or of one of its exemplars) should reach the membership threshold ('standard').

On the other hand, adjectives (like *healthy*) are associated with either a single categorization criterion or a set of criteria which are incorporated through Boolean operations (conjunction or disjunction, or equivalently, universal or existential quantifiers). Thus, to count as an instance of an adjective, an entity has to reach the standard in either a single dimension or a dimension-conjunction or -disjunction. The processing of the dimensions is explicit. Hence, adjectives, but not nouns, have dimensional argument slots that can be overtly saturated or bound.

The diagnostics for dimensional arguments include *except* phrases, *with respect to* phrases, *in every respect* and probably more:

(43) a. Tweety is healthy in every respect

    b. #Tweety is a bird wrt flying / size

The difference between (43a) and (43b) is in the accessibility of the domains, though in both cases we are dealing with a multidimensional predicate. 'Gradable individuals' pass this test, resembling multidimensional adjectives:

(44) a. Ami's facial features are SO Paris Hilton, except for the Asian eyes (from web)

    b. This is so LA. . . except for all the bicycles! (about a photo)

(45) a. These shoes are 1994 in every respect!

Summing up, the gradable property denoted by 'gradable individuals' is a complex, multidimensional property that picks its dimensions from individuals' properties, which is absolutely compatible with the observations we made in the previous sections. From this perspective, *Einstein* is like *healthy* in that its dimensions (here—properties of the individual Einstein) get unfolded and are accessible for overt manipulation.

(46) a. $[[Einstein_C]] = \lambda x \lambda d.\ \forall F \in F(Einstein,c)\colon x \in (C)\ \&\ x\ is\ d\text{-}F$

b. $[[Einstein_C]] = \lambda x \lambda d.\ \forall F \in F(Einstein,c)\colon d\ is\ max(C)\ and\ x\ is\ d\text{-}F$

(46) does not look very different from the Vector Space-based denotation, the difference being that we now know the way the dimensions are put together better than before—they are quantified over universally.

Thus we can say that there is an analogy between the 'gradable individuals' and the multi-dimensional gradable predicates, or even that the former are a case of the latter. There is a crucial difference between the two, though. The multi-dimensional gradable predicates are predicates in the first place, while 'gradable individuals' are individuals. We face basically the same problem as in the beginning, in (24). We had to perform two type-shifts: one from individuals to the set of their properties, the other from the set of properties to a single property. Note that there might be an intermediate step involved in (24): if the first shift is the "LIFT" shift from (Partee 1986), it gives the set of all properties of the individual, and this set will further need to be contextually restricted before (24b). Otherwise, there might be too many properties to get the right semantics for the resulting predicate. Alternatively, we could invent a new "lift" that lifts to contextually relevant properties only. In any case, (24) is a complicated story.

Now we have to get from an individual to a (multidimensional) property. Again, we have to say something about this shift—at least how and under what circumstances it comes about. At this point we need to turn to proper name semantics.

7. PROPER NAMES AS PREDICATES

The peculiar thing about the construction we are describing is that it seems restricted to proper names. Assuming that they (rigidly) denote individuals one would expect to find other individual-denoting expressions in this position, say, definite descriptions. But this is not the case:

(47) a. *This is so my Dad's friend!

b. *This is so Julia's boss!

The semantic accounts of proper names have a long tradition of treating these lexical entries as predicates rather than individual-denoting

expressions (Bach 1981, 1987, 2002; Geurts 1997; Recanati 1997; Matushansky 2008 a.m.o.). One of the arguments for this comes from languages that use definite articles with proper names in argument positions (16a Matushansky 2008):

(48) a. Ich habe den Karl gesehen. dialectal German
I   have the-ACC Karl seen
I have seen Karl.

Languages that either use a regular definite article with proper names or a *preproprial* article (a definite article that specializes on proper names) include dialectal German, Catalan, Modern Greek, Northern Norwegian, Northern Swedish, colloquial Icelandic, Pima (Uto-Aztecan), Tagalog and many others (19, 22a Matushansky 2008):

(49) Kalabaw si Marcos. Tagalog
water-buffalo the.PRPR Marcos
Marcos is a water buffalo.

(50) Ho Marit så han Øystein. Northern Norwegian
she Marit saw he Øystein
Marit saw Øystein.

There are positions though—namely, predicate positions—where the proper names even in these languages forbid the definite article. The data that Matushansky provides come from the naming constructions (=23,21, 16b Matushansky 2008):

(51) a. Dæm døpte barnet (∗ho)Marit. Northern Norwegian
they baptized child.the (she)Marit
They baptized the child Marit

b. Han heter (∗han)Øystein.
he is.called he Øystein
He is called Øystein.

(52) Va resultar que (∗en) Johnny el van Catalan
go-3SG turn.out that the Johnny him go-3PL

anomenar (∗en) Jonathan
name the Jonathan
It turned out that Johnny had been named Jonathan.

(53)   Ich   habe ihn   (∗den)   Karl genannt   Dialectal German
       I   have him-ACC the-ACC   Karl called
       I called him Karl.

These facts (along with others that we do not mention here) have led scholars to the conclusion that proper names have predicate semantics along the following lines (denotation from Matushansky 2008):

(54)   [[Alice]] = $\lambda x \in D_{e-}$ $R_{<e,<n,t>>}$. $R(x)$ (/ælɪs/)
       where n is a sort of the type e (a phonological string) and R
       is a 'naming convention' between the speaker and the hearer
       (Recanati 1997).

A naming convention is a relation between a phonological string and an entity that bears that phonological string as its proper name due to this naming convention. By default the naming convention slot is filled by R_0—the naming convention in force between the speaker and the hearer. Thus we end up with predicate semantics.

   We thank Susan Rothstein (p.c.) for an idea of a quick study of languages that use definite or preproprial articles with proper names in order to check whether these languages use an article with a proper name in the construction we are investigating here. The two options lead to different analytic possibilities. If a language has this construction in the first place, the presence of the article would indicate that we indeed have a 'gradable individual' case to deal with, with everything that accompanies it—the type-shift from individuals to properties being the part we are in doubt about. If, on the contrary, it turns out that the article is absent from the construction, we will get the predicate meaning for free, which would simplify the analysis with respect to type matching. Nevertheless, the interpretational questions will need to be solved in this case—namely, the uniqueness of the object denoted by the proper name predicate will need special treatment.

   In checking the options we discussed above we were looking for languages that both use (definite/preproprial) articles with proper names in argument positions and have the construction that we are discussing. The languages we found are Modern Greek (Sophia Manika, p.c.), colloquial Icelandic (Björgvin Gunnarsson, p.c.) and dialectal German (Bettina Gruber, p.c.). All three go for the second option—namely, there is no article with the proper name in this construction:

(55)   Afto   ine   toso   (∗i)   Madonna   Modern Greek
       This   be.PRS so   (∗DEF.FEM)   Madonna
       This is so Madonna

(56)   Das   ist   so   (∗die)   Madonna   dialectal German
       This   be.PRS.3SG   so   DEF.FEM   Madonna
       This is so Madonna

(57)   Hárið   hennar er   svo   mikið Madonna!   colloquial Icelandic
       Her   hair   be.PRS   very   much Madonna
       Her hair is so very Madonna!

A complication that Ora Matushansky pointed out (p.c.) is that predicate positions can forbid the definite article for purely syntactic reasons. To investigate this possibility in the languages we were considering we checked the predicate position for ungrammaticality of use of definite articles with a noun phrases. In Modern Greek and dialectal German the article is optional in this position but it is nevertheless not forbidden:

(58)   Egine   o   proedros   Modern Greek
       Become.PST.3SG   DEF.MASC   president.NOM
       He became president

(59)   Er   wurde   (der)   Präsident   dialectal German
       He   become.PST.3SG DEF.MASC   president
       He became president

Colloquial Icelandic might be a case of this kind of syntactic restriction, but we did not conduct a study of the Icelandic case, where according to one speaker we consulted, the only available option is in (60):

(60)   Hann   varð   forseti   colloquial Icelandic
       He   become.PST.3SG president
       He became president

The article is optional in this position but it is nevertheless not forbidden, unlike with proper names in (55–57). So the option that one finds across languages is the predicate type for proper names that are used in this construction, and the absence of the article is not purely syntactic.

Thus, we do not need to account for the shift from individuals to predicates because it never happens, and the proper names in this construction not only start as predicates, but remain predicates all the way, unlike in argument positions.

There is a semantic issue here, though. We discuss it in the next section.

8. FROM PROPER NAME PREDICATES TO GRADABLE INDIVIDUALS

Recall the semantics for proper names in (54):

(54) $[[\text{Alice}]] = \lambda x \in D_{e-} R_{<e,<n,t>>}. R(x) (/\text{ælɪs}/)$
   where n is a sort of the type e (a phonological string)

It is basically a set of individuals that have the same naming convention.

Compositionally, there is a crucial difference between argument and predicate positions, though. According to Matushansky (2008), proper names in argument positions have their naming convention argument slot saturated by a free variable—that of the naming convention in force between the speaker and the hearer, or more strictly speaking, the naming convention of the speaker that is presupposed to be shared by the hearer (R_0). It is indexical in the sense of being fully extensional: it contains no argument slot for a possible world.

The composition of proper names in argument positions is not straightforward, see the derivation below. Matushansky (2008) uses the mechanism proposed in (Heim and Kratzer 1998), where a null operator (PRO) can be freely merged inside xNPs. "This operator moves, leaving behind an e trace, which makes it possible for the proper name to merge with [...] R_0. The null operator is then re-merged, forcing λ-abstraction and resulting in an <e, t>-type NP, which can now be combined with the definite article" (Matushansky 2008: 596):

(61)
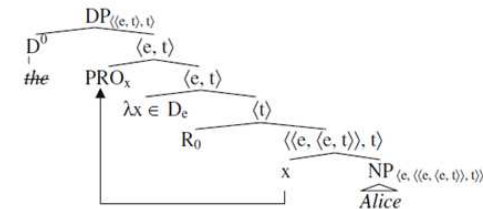
The part of the meaning that states that there is a single (salient) individual that this convention holds of is contributed by the definite article in the argument position.

Proper names in predicate position do not involve anything like (61), though. When a proper name is embedded under a naming verb (*name, baptize* etc.), it is part of a small clause that a naming verb takes as its complement. Here is the semantics for an example small clause as found in Matushansky (2008):

(62) $[[\text{the girl Alice}]] =$ (= 51 (Morzycki 2009b)
      $= [[\text{Alice}]] ([[\text{the girl}]]) =$
      $= \lambda x \in D_{e-} R_{<e,<n,t>>}. R(x) (/\text{ælɪs}/)([[\text{the girl}]])$
 $=$
      $= \lambda R . R([[\text{the girl}]]) (/\text{ælɪs}/)$
      where n is a sort of the type e (a phonological string)

The small clause complement of a naming verb still has one open argument slot—that of the naming convention. This analysis leaves no option for the predicate uses of proper names other than under the naming verb. If the small clause in (62) has type <nt>, it should be able to combine only with naming predicates. If the naming convention slot is filled by R_0, the small clause is not expected to combine with anything at all:

(63)
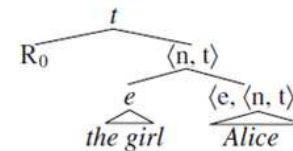
However, cases of other predicate uses clearly exist (49, 115, 116 Matushansky 2008):

(64)   a. Born [PRO Charles Lutwidge Dodgson], the man who would become Lewis Carroll was an eccentric and an eclectic.

        b. Once she went to school, she stopped being Esmeralda and became simply Es.

        c. Dr. Asher is Claire in France and Klara in Germany.

There is no straightforward account for these cases, the intuition proposed in Matushansky (2008) being that in these cases the naming convention R_0 is relativized to different places and times. This allows proper names to appear as complements of change of state verbs despite the fact that neither R_0 nor the proper name has a temporal argument slot.

In any case, the meaning made very prominent in (64) is that of "being named so-and-so". This is not what one finds in the case of our construction. Consider again sentences (1–2) repeated here:

(1)   a. Matching shirt and hat is so McDonalds. (≈cheap, unfashionable)

        b. Buying DVDs is so 2004! (≈out-of-date)

        c. Yeah, that is so Obama! (≈cool)

(2)   a. Ad: "How to dance at a club or party: An analytical approach" Comment: "This is so Google!"

        b. this is SO PARIS ! absolutely amazing ! (about a fashion show)

        c. I preferred rural France, Paris is so Paris.

        d. It is SO New York City in the 1970s! (about Buenos Aires)

        e. It is a masterpiece video. The way it's put together, it is so New York.

        f. My mom is so Berkley (a name of a Facebook group)

In none of these cases is the property of "being named so-and-so" assigned to the subject. The shirt and hat are not named McDonalds, the video is not named New York etc. Rather, semantically, these uses bring to mind so called metaphorical uses of proper names, to which we now turn.

9.   METAPHORICAL USES OF PROPER NAMES

The cases of proper name coercion were discussed in Boër (1975) and Gary-Prieur (1991, 1994) examples from Matushansky (2008):

(65)   a. He is such a (typical) Jeremiah—very Old Testament, very protestant, very proper.

        b. She is a veritable Mary Poppins.

        c. St. Petersburg was considered the Venice of the North.

The shift that happens in (65) can be thought of as a shift to kinds, either presupposing properties that all the people with this name share (65a) or the properties of a single known individual with a certain name (65b-c).

This is strongly reminiscent of how proper names function in the construction we are discussing. However, there is a crucial difference between the two cases with respect to the use of determiners. The metaphorical uses of proper names require an article, which clearly follows from the semantics: at least in (65b-c) the set of properties of the new kind is formed by the set of properties of the single individual bearing that name. Thus this coercion happens at the level of the individual-denoting expression rather than the predicate level. As we have seen in section 7 above, this is not the case with the construction that we are discussing. Though clearly it shares with metaphoric proper names the property of referring to a single individual's characteristics, it operates on a property level, before the determiner attaches. This is a puzzle that we do not have a solution for, but that we would like to discuss at some length.

10.   SINGLETON SET PROBLEM

The puzzle we have ended up with is a result of the combination of two facts about our construction: 1) the resulting gradable property is based on the on the single individual bearing this or that name; 2) the proper name entering the construction is a predicate, i.e. denotes the set of individuals bearing this or that name.

An answer one is tempted to give to this problem is based on the view that proper names lexically encode singleton sets. This would

help combine the two facts described above. The semantic type of the proper name would stay predicative, but the access to the single individual bearing the name would be easy as the set would be a singleton set. One of the ways to implement it is to analyze a naming convention R_0 as a function from individuals to phonological strings. There are some arguments in favor of this view, see discussion in Matushansky (2008). Crosslinguistically, proper names act as definites by default and do not usually appear with definite articles; when they do appear with the article, the article is by default definite. The cases in (66–67) are a marked option:

(66) a. There are relatively few Alfreds in Princeton.   (Burge 1973)

       b. Some Alfreds are crazy; some are sane.

(67) a. There's a Mr. Smith to see you, sir.   (=63 Matushansky 2008)

       b. This Rover of yours has overturned the garbage again!

       c. Every John Smith hates his name.

However, the function from individuals to strings is not able to explain the possibility of (66–67) at all, as well as the presence of the definite article whenever it is present. The other problem for this analysis is the existence of complex proper names like *Lucy Smith*. If one wants to treat them compositionally, *Smith* should be treated along the lines of appositive constructions, as *Lucy* is already a singleton set.

    We are not in a position to make a point on this discussion, but we consider it relevant for the topic of this paper. We might look for an analysis that does not hardwire uniqueness of the bearer of the name into lexical semantics of proper names, but rather introduce it as a pragmatic add-on linked to a lexical class of proper names.

11.   PROPER NAMES, DEGREES, TYPE-SHIFTING AND COERCION

The picture we have arrived at is a rather complicated one. To participate in the 'gradable individuals' construction, a proper name undergoes certain semantic changes that operate on its <et> type as an input and give a gradable property as an output, with a degree variable on top. We used terms 'type-shifting' and 'coercion' as if they were

synonymous. Though, as one of the reviewers points out, this process is rather different from common type-shifting processes. The term "type-shifting" is commonly used for standard automatic operations for purposes of compositionality. Originally, however, type-shifts were designed to be either "contentful" or "purely formal". We will not go deep into this discussion here, allowing for a situation where type-shifting and coercion happen together—in fact, that the type-shift can happen to an entity when it is coerced. And though <et>→ <det>on the surface looks like stacking a variable on top of whatever was there before, the processes involved are much more complicated than that, and, as we saw, require various semantic changes.

    The input <et>property is not used directly to build a gradable property by ordering its elements, which would be a natural move. Rather, this is a property of 'being named so-and-so', which has a pragmatically attached preference for contextually denoting a singleton set. The element of this set is used to reason about its properties. The subset of these properties then is picked using the properties that are contextually salient and that have the individual high on their scales. This subset is finally packed into a multi-dimensional gradable property—either upper-closed scale or 'extreme'.

12.   CONCLUSION

We discussed a 'so NP' construction in English and (briefly) in several other languages. The main points of our discussion include the following: the construction is restricted to (possibly branched) proper names; the proper names enter the construction as predicates—probably, as singleton sets; the predicate is shifted from an <et>predicate to a multi-dimensional gradable predicate, whose dimensions are based on the properties of the single element of the proper name set; the individual denoted by the proper name either serves as an upper bound on the scale or higher than the contextually relevant area on the scale, the resulting property thus resembling 'extreme' adjectives. We do not provide a formal account of the construction here but we believe it to be relevant for the other discussions that we list in the 'Further issues' section.

13. FURTHER ISSUES

13.1. Singleton set problem

As discussed in section 10, the analysis of our construction would benefit from a singleton set analysis of the proper name predicates. The construction we are discussing might turn out to be one of the constructions sensitive to uniqueness of the referent, like verbs of nomination (Stowell 1989):

(68)   a. The queen appointed her lover treasurer of the realm.

      b. Anne's death made George (the) king of England.

(69)   We named him public enemy ∗(number 1)/∗enemy of the state.

We leave the discussion open.

13.2. Mediation problem

Rather often the subject of a sentence with a 'gradable individual' does not exactly match the class of the 'gradable individual': it's not the case that it is always a person that is compared to, say, Paris Hilton:

(70)   a. Ami's facial features are SO Paris Hilton, except for the Asian eyes(from web)

      b. Those shoes are {totally/absolutely} 1994.

In (70a), Ami is compared to Paris Hilton indirectly, the comparison being mediated by her facial features (Paris' features get compared to Ami's). In (70b), the mediation is implicit: there is no overt constituent that indicates that the shoes are compared to the shoes that were typically worn in 1994.

The mediation / non-locality problem is not unique for 'gradable individuals' (Kennedy 2007, fn. 11, Schwarz 2010):

(71)   Mia is tall [for a girl].

(72)   a. This story is sophisticated [for a 3-year old].

      b. Mia has an expensive hat [for a 3-year old].

(73)   {x: x is a 3-year old} ⟺_{mediation} {y: y is a story by/for a 3-year old}

Usually, the *for*-phrase denotes a comparison class that helps fix a contextual standard of comparison, so that Mia in (71) exceeds the standard height of girls, not that of individuals in general (Bale 1991). A presupposition that Mia is included in the set of girls is attested in this sentence. The inclusion presupposition is absent in (72b). A mediation relation as in (73) has been postulated at least for some of these cases.

One of the options to analyze (at least some of cases of) mediation is reducing it to functional standard construction (Heim 2000, Kagan & Alexejenko 2010) rather than (mediated) comparison classes, as in *This hat is expensive for me*.

'Gradable individuals' are an example of mediation that cannot be reduced to functional standards and thus prove a need for a non-functional-standard analysis of mediation effects.

Notes

[1] For a discussion of new and noncanonical uses of *so* see a topic on Linguist List: http://linguistlist.org/ask-ling/message-details2.cfm?AsklingID=20043066

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