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On approximative degree morphology in Finnish: A comparison of two suffixes*

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Abstract: This paper discusses two approximative suffixal morphemes in Finnish, *-hkO* and *-VhtAvA* which, at first glance, both seem to resemble English *-ish*. However, I show that these two suffixes differ systematically in their distribution and semantics, and operate on different kinds of scales. I propose that *-hkO*, which attaches to gradable adjectives, signals proximity to a standard on a gradable scale provided by the adjective that *-hkO* modifies. In contrast, I claim that *-VhtAvA,* which attaches to nouns, signals proximity to a prototypical/canonical denotation of the noun that *-VhtAvA* modifies. Thus, the two approximative degree morphemes in Finnish wear their scale structure on their sleeve, so to speak. Evidence from comparatives and superlatives, as well as constraints on the order in which these suffixes can be stacked, supports the proposed analysis.

Keywords: approximative morphemes, degree morphology, scale structure, adjectival suffixes, Finnish, prototypes, categorization, adjective, noun, gradability

1 Introduction: Approximatives

Languages have different devices for expressing the general notion of approximation. Some morphological options available in English include the suffixes *-ish* (e.g. fluish), *-esque* (e.g. Kafkaesque), the modifier *-like* (e.g. moon-like, velvet-like) and the expression *sorta* (e.g. sorta tall). These kinds of elements express meanings along the lines of 'similar to X, in the style of X, resembling X, approaching X' (e.g. Anderson 2013; Bauer et al 2015; Sugawara 2012; Bochnak & Csipak 2014; Oltra-Massuet 2017; Harris 2020; Hüning & Schlücker 2023; Šuković 2023; Eitelmann & Haumann 2023; Morris 1989, and many others).

Among these expressions, English *-ish* has attracted interest due to its flexibility: it can attach to different categories or stand freely (e.g. Sugawara 2012;

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2017; Bochnak & Csipak 2014; Oltra-Massuet 2017), as illustrated in (1):

(1) a. It's tall-ish / it's toy-ish.
b. Let's go at 3-ish.
c. Let's go now-ish.
d. I didn't like the party…ish.
e. Speaker A: Got a plan? Speaker B: Ish.

It has been proposed that *-ish* can target different scale types, in particular scales of degrees contributed by gradable adjectives (e.g. *tall-ish*) and scales of precision contributed by metalinguistic coercion/type-shifting (e.g. *three-ish*), see e.g. Sugawara 2012; Bochnak & Csipa 2014). I return to this observation below.

From a crosslinguistic perspective, there exist various approximative morphemes with a range of meanings (e.g. Hüning & Schlücker 2023 on German and Dutch). Some examples from German are in (2). It is worth pointing out that there is not a direct one-to-one mapping across languages in terms of meaning(s), which highlights the need for further crosslinguistic work.

(2) *grippeähnlich* 'flulike, flu-y', *samtartig, samtähnlich* 'velvety, velvet-like', *kafkahaft, Kafkaesk* 'Kafkaesque', *mondhaft, mondartig* 'moon-like', *studentenmäßig* 'student-ish' (Hüning & Schlücker 2023)

Many questions still remain open concerning the semantics and pragmatics of approximation, crosslinguistic variation in expressing approximation, as well as form-meaning relations. In this paper, I focus on two approximative morphemes in Finnish (Finno-Ugric), *-hkO* and *-VhtAvA*, and propose that they operate on different scales: *-hkO* targets a scale that involves degrees provided by the adjective, whereas *-VhtAvA* targets a scale of degrees of closeness to a prototype.

1.1 Focus of this paper: Approximatives in Finnish

As illustrated in (2) and (3), Finnish has two approximative suffixes *-hkO* and *-VhtAvA*.[1] At first glance, both seem to resemble *-ish*, and thus I gloss them as such in the English translations throughout. In (2), *nuorehko* is naturally glossed as 'young-ish' in English, and in (3), *technohtava* can be glossed as 'techno-ish.' (The abbreviation [www] indicates that the Finnish example is a naturally-occurring example found on the internet or from the internet corpora of the Kielipankki Language Bank of Finland, see Borin et al. 2012).

[1] Use of capital letters (here, A and O) indicates that the vowel is subject to vowel harmony, 'V' indicates a stem-determined vowel.

(2) **-hkO**

Suosittelen sellaiseen kotiin, jossa olisi **nuore-hko**
Recommend.1st such.ILL home.ILL where be.CND young.NOM-ish
koira leikkikaverina [www]
dog.NOM playmate.ESS
'I recommend (she be adopted) into a household with a **youngish** dog to play with' (on rescue dog)

(3) **-VhtAvA**

tällä kertaa joukossa myös muutama **techno-htava** biisi. [www]
this.ADE time.PAR group.INE also some techno.NOM-ish song.NOM
'This time the mix also includes some **techno-ish** songs.'

In this paper I show that, despite their surface similarity, these two suffixes differ systematically in their distribution and semantics. In particular, in the rest of this paper I argue that *-hkO* – which attaches to gradable adjectives – signals proximity to a standard on a gradable scale provided by the adjective that *-hkO* modifies. In contrast, I claim that *-VhtAvA* – which attaches to nouns – signals proximity to a prototypical/canonical denotation of the noun that *-VhtAvA* modifies. Thus, these two morphemes operate on different scales: *-hkO* targets a scale that involves degrees provided by the adjective, whereas *-VhtAvA* targets a scale of degrees of closeness to a prototype / prototypical properties. The Finnish data suggest that these two meanings, though related, are semantically distinct enough from each other that they merit being morphologically distinguished in a language.

1.2 Background: Finnish adjectival morphology

Finnish has a rich system of suffixal derivational morphology, with over 100 nominal and adjectival suffixes and around 50 verbal suffixes (e.g. Vesikansa 1977). Due to stem-controlled vowel harmony, suffixes often have two allomorphs. Thus, *-hkO* surfaces as *-hko* or *-hkö* (shown using Finnish orthography, IPA: /hko/ and /hkø/, /h/ syllabifies onto the preceding syllable). Similarly, *-VhtAvA* surfaces as *-Vhtava* or *-Vhtävä* (Finnish orthography, IPA: /Vhtɑvɑ/ and /Vhtævæ/, V denotes a stem-determined vowel). In what follows, I use Finnish orthography. Furthermore, the addition of a suffix can sometimes trigger changes inside the stem, and the boundary between the stem and suffix is not always clear (e.g. Pitkänen-Heikkilä 2016 and references cited therein).

Most derived adjectives in Finnish are denominal, and the most common denominal adjectival suffix is *–(i)nen* (e.g. Pitkänen-Heikkilä 2016), see (4):

(4) a. *lika* 'dirt' => *lika-**inen*** 'dirty'
b. *ilo* 'joy' => *ilo-**inen*** 'happy'
c. *aurinko* 'sun' => *aurinko-**inen*** 'sunny'

However, this is not the only way to make adjectives. Other denominal adjectival suffixes include *-llinen* (*pilkku* 'dot', *pilkullinen* 'dotted'), *-liAs* (apu 'help', *avulias* 'helpful'), *-vA* (*järki* 'sense, sanity', *järkevä* 'sensible'). Deverbal adjectives can be created using participles (e.g. *-nUt*: *onnistua* 'to succeed,' *onnistunut* 'successful') or suffixes such as *–(e)liAs* (e.g. *puhua* 'to speak,' *puhelias* 'talkative').

In this paper I take a close look at another option, namely the approximative suffixes *-hkO* and *-VhtAvA*, which attach to adjectives and nouns respectively, and yield adjectives. I discuss their semantics in the following sections.

1.3 Differences in grammatical category: *-hko* vs *-Vhtava*

There is a striking asymmetry in the grammatical category of the roots that these two suffixes attach to. As shown in (5-6), *-hkO* attaches to (gradable) adjectives and yields adjectives; it is unacceptable with nouns. Thus, *-hko* can be added to the adjectives *uusi* 'new' and *suuri* 'big' (5a-b), but not to the nouns *jatsi* 'jazz' or the proper name *Trump* (6a-b). In contrast, *-VhtAvA* attaches to nouns like *jatsi* and *Trump* (6a-b), but cannot be attached to adjectives like *uusi* or *suuri* (5a-b).[2] With both suffixes, the resulting word is an adjective, as illustrated in (5-6).

(5) *-hkO* attaches to adjectives
a. Hänellä on ^{OK}uude-**hko** / *uud-**ehtava** auto
S/he.ADE on new.NOM-**ish** car.NOM
'She/he has a new-**ish** car.'
b. Tutkimuksen kohderyhmä oli ^{OK}suure-**hko** / *suur-**ehtava**. [www]
Study.GEN target.NOM was large.NOM-**ish**
'The study's target group was large-**ish**.'

(6) *-VhtAvA* attaches to nouns
a. Se on *jatsi-**hko** / ^{OK}jats-**ahtava** kappale. [www]
It.NOM is jazz.NOM-**ish** piece.NOM
'It is a jazz-**ish** piece'.

[2] There are a couple of lexicalized examples of *-VhtAvA* attaching to adjectives: (i) *vanha* 'old' => *vanhahtava* 'archaic,' not old-ish/old-like, and (ii) *hassu* 'funny' => *hassahtava* (of a person) 'foolish, forgetful, slightly crazy,' not funny-like. In these exceptions, the meaning is not predictable and diverges from the approximative meaning of regular *-AhtVvA* adjectives. Thus, I put them aside.

b. * Trump-**ihko**t / [OK]Trump-**ahtava**t ukot ovat
Trump-**ish** old-men.PL be.3PL
saaneet pahaa aikaan. [simplified from www]
get.3PL bad.PAR done
'Trump-**ish** old guys have done bad things.'

Before continuing, it's worth noting that *-hkO and -VhtAva* have phonological and morphophonological constraints that are orthogonal to their semantics (e.g. Hakulinen et al. 2004, see also Korpela 2021) and thus not discussed here (see e.g. Hakulinen et al. 2004, Section 294 on *-hkO*, Section 295 on *-VhtAvA*).[3] Furthermore, although the examples mostly show the suffixes attached to adjectives in nominative case, they can occur in all cases, not just nominative.

2. *-hko*: Proximity to a standard on a gradable scale

As illustrated in (7), *-hkO* can attach to gradable adjectives with (i) unbounded (open) scales, (ii) upper-bounded scales, as well as (iii) lower-bounded scales. However, it is odd with nongradable adjectives (unless coercion occurs).

(7) a. *pieni* 'small' => *pienehkö* 'smallish' open scale
b. *kuiva* 'dry' => *kuivahko* 'dryish' upper-bounded scale
c. *märkä* 'wet' => *märähkö* 'wet-ish' lower-bounded scale
c'. *kaareva* 'curved' => *kaarevahko* 'curved-ish' lower-bounded scale
d. *kuollut* 'dead' => * *kuolleehko* non-gradable
d'. *vegaani* 'vegan' => ? *vegaanihko* non-gradable, coerced to gradable

To capture the distribution and semantics of *-hko*, I build on Bochnak & Csipak's 2014 analysis of English *-ish* (see also Sugawara 2012), but with some crucial changes. Following Bochnak & Csipak on *-ish*, I analyze *-hkO* as function applied to a gradable predicate *P* which outputs a property that is true for an individual *x*, if the degree to which the gradable predicate holds of individual *x* is *slightly less* than the standard for that predicate. This is shown in (8), where d_s is the contextually-provided standard degree.

(8) $[\![\text{-}khO\ ]\!]^c = \lambda P_{\langle d,et\rangle}\, \lambda x.\max\{d|P(d)(x)\ \} \prec d_s \wedge \textbf{small}_c\ (d_s - \max\ \{d|P(d)(x)\})$

[3] In addition to constraints on the length and final vowel of the root/stem that each of the suffixes can attach to (see Hakulinen et al. 2004), *-hkO* also seem resistant to attach to many derived adjectives, e.g. those derived with *–(i)nen*. What *-hkO* can modify seems to vary depending on suffix type (e.g. *järke-vä* 'sense' => *järke-vä-hkö*, but *puhe-lias* 'talkative' => *?*puhe-lia-hko*, *avu-lias* 'helpful' => *?*avu-lia-hko*). I leave these morphophonological constraints for future work.

Following Bochnak & Csipak 2014, I include the context-sensitive predicate **small**$_c$ which is true of a degree if it counts as 'small' in a particular context (see also Morzycki 2012). Given that here we are talking about the difference between the standard degree for the gradable predicate and the degree to which an individual holds the property, **small** essentially prevents the degree to which an individual holds the relevant property from being too low.

2.1 Lower-bounded adjectives

Under an approach where *-hkO* and *-ish* target a degree which is slightly below the standard, their ability to modify gradable adjectives with open scales and upper-bounded scales is entirely predicted. But what about lower-bounded adjectives (e.g. *bent, wet*)? According to Bochnak & Csipak, *-ish* is not possible with lower-bounded adjectives, since *-ish* targets a degree below the standard and they assume that with lower-bounded adjectives, there is no degree below the standard (i.e., the standard is the minimum on the scale).

However, the judgments seem somewhat murky. For example, Sugawara 2012; 2017 provides experimental evidence suggesting that *-ish* is fine with lower-bounded adjectives in the right context. Sugawara shows that when given a picture of a person with a somewhat bent nose, participants rated (9a) as 4.125 out of 5, on a scale where 1 is 'bad description' and 5 is 'good description,' whereas when shown a picture of a line that is a little bent, participants rated (9b) as only 2.5 out of 5. This suggests that, in the right context, *-ish* can modify lower-bounded adjectives. Sugawara suggests lower-bound adjectives can be modified with *-ish* in contexts that make available "a non-zero degree of the standard of *properly ADJ*."

(9) a. His notes is bent-ish.
b. ?* The line is bent-ish.

Paraphrasing somewhat, we can describe this as follows: *-ish* can modify lower-bound adjectives in a context where the contextually relevant standard is higher than the minimum. For example, human noses are not perfectly geometrically straight; all noses are bent in various directions to some degree. Intuitively, to count as 'properly bent', a nose has to be very clearly bent – i.e., in this situation, the contextually relevant standard is *higher* than the geometrically-defined minimum. Thus, a nose can be described as 'bent-ish' because there *does* exist a degree below the standard, since the standard ('properly bent') is higher than the minimum. In contrast, a line drawn on a piece of paper can be perfectly geometrically straight, and thus here the contextually relevant standard is the minimum and there is no degree below the standard. Thus, describing a line as 'bent-ish' is infelicitous.

Relatedly, Rotstein & Winter 2004 also argue that the standard of lower-

bounded adjectives does not have to be the minimal degree on a scale. They acknowledge that, with lower-bounded adjectives, the *default* standard is the minimum, and that's why sentences like 'The towel is almost wet' can sound strange out of context. (Rotstein & Winter focus on *almost* and do not discuss *-ish.*) Crucially, they argue that there are contexts where the contextually-relevant standard is *above* the minimum. In these contexts, it is possible to target a degree that is below the standard, and thus (10) is acceptable (example from Rotstein & Winter 2004: 280).

(10) The towel is very moist. . . it is almost wet.

Building on Sugawara 2012, 2017 and Rotstein & Winter 2004, I suggest that *-ish* and Finnish *-hkO* can modify lower-bounded adjectives in the right context, namely when the contextually-relevant standard is above the minimal degree on the scale. For example, *wet-ish sand* is fine in a context where sand with a little bit of water doesn't reach the relevant contextual standard of being 'properly wet.' This exemplified in (11) for English. The writer describes using a metal detector on different kinds of sand, and compares 'dry sand', 'wet-ish sand' and 'salt water wet sand.' The adjective *wet-ish* is fine here: 'wet-ish sand' is presumably being contrasted with 'salt water wet sand', and thus the contextually relevant standard is high enough such that *-ish* can target a degree below the standard:

(11) Overall it was fine on the dry sand. On "wet-ish" sand from the rain it did OK too. On salt water wet sand there was too much chatter to use.
[talking about a metal detector, www]

In a similar vein, I argue that *-hko* can modify not only upper-bounded adjectives but also lower-bounded adjectives in the right contexts. Specifically, with lower-bounded adjectives, in contexts where the standard value is higher than the minimum value on the scale, *-hkO* targets a degree lower than this standard. Thus, *märähkö* 'wet-ish' is true of an individual *x* if the degree to which 'wet' holds of x is *slightly less* than the standard for that predicate.

This is illustrated in (12), where the author uses *märähkö* 'wet-ish' as a synonym for *kostea* 'damp', when describing skin whose degree of wetness is below the contextual standard. Similarly, in (13) another lower-bound adjective, *kaarevahko* 'bent-ish/curved-ish' is used to describe a saddle frame shape. Both of these are contexts where the contextually-relevant standard is above the minimum, so *-hkO* can target a degree below the minimum.

(12) Kivideota käytettäessä kainalon on oltava kostea / **märä-hkö**,
Stone-deo.PAR using.PRT armpit.GEN is be.PTC damp.NOM / wet-**ish**
jotta kivi luistaa iholla. [www]

so-that stone.NOM slide.3SG skin.ADE
'When using crystal deodorant, the armpit must be damp/**wet-ish**, so that the crystal slides on the skin.'

(13) Olennaista satulan istuvuudessa on myös rungon malli.
Essential.PAR saddle-GEN fit.INE is also frame.GEN type.NOM
Eli onko satula ihan suora, suorahko,
So is.Q saddle.NOM totally straight, straight-ish,
kaareva-hko vai vallan kaareva. [www]
curved-ish or perfectly curved.
'The type of the saddle frame is essential for the fit of a saddle. In other words, is the saddle totally straight, straight-ish, **curved-ish** or perfectly curved.'

In sum, if we allow the standard for lower-bounded adjectives to be context-sensitive, the denotation in (8) provides a unified characterization of Finnish *-hkO*.

2.2 Scales of precision

Recall that English *-ish* can be attached not only to adjectives, but also to nouns (1a), numerals (1b), temporal adverbs (1c), as well as entire clauses/propositions (1d). It can even occur a free morpheme (1e), at least in some dialects of English. However, as I show in this section, Finnish *-hkO* cannot modify these kinds of elements, which I attribute to it not targeting scales of precision.

Given that *-ish* can modify elements beyond gradable adjectives, Bochnak & Csipak 2014 argue that, in addition to degrees provided by gradable adjectives, *-ish* can also target degrees of precision. To explain how scales of precision are available in contexts like (1c-e), Bochnak & Csipak make use of a type-shifting operation, building on Morzycki's 2011 work on metalinguistic comparison and his PREC operator, which lambda-abstracts over (metalinguistic) degrees of precision. In essence, PREC can be applied to propositions of type ⟨s,t⟩ and yields propositions of type ⟨d,⟨s,t⟩⟩, thus providing a degree (of precision) for *-ish* to target. This allows captures *-ish* in contexts beyond gradable adjectives.

In contrast English *-ish*, Finnish *–khO* can only modify gradable adjectives. It is ungrammatical with numerals and nouns (14a,b). It also cannot modify temporal adverbs like *now* (14c), propositions (14d), or stand on its own.

(14) a. Tavataan kolmelta / *kolmelta-**hko**
meet.1PL three.ABL / *three.ABL-**hko**
'Let's meet at three / three-**ish**.'

b. Se on lelu / *lelu-**hko**
It.NOM is toy.NOM / *toy-**hko**
'It's a toy / toy-ish.'
c. Meidän täytyy lähteä heti / *heti-**hkö**
we.GEN must leave now / *now-**hko**
'We have to leave now / now-**ish**.'
d. En tykännyt bileistä / *bileistä….**hkö**
neg.1st liked party.ELA / *party.ELA…**hko**
'I didn't like the party / party….hko'

These data follow if *-hkO* lacks access to the type-shifting operation PREC (Morzycki 2011) that allows *-ish* to target scales of precision. Thus, the observation that Finnish *-hkO* only targets scales lexically contributed by gradable adjectives can be straightforwardly explained.

3 *-Vhtava*: Proximity to a prototype

Let us now consider the properties of the second approximative suffix, *-VhtAvA*. In contrast to *-hkO*, *-VhtAvA* modifies nouns (15) (examples from www), but not adjectives (16). Thus, it can attach to nominals like *slangi* 'slang', *ranska* 'French language' and proper names like *Björk* (Icelandic musician), but it attaches to neither gradable nor non-gradable adjectives, as shown in (16).

(15) a. *pop* 'pop music' => *popahtava* 'pop music-ish, resembling pop music'
b. *slangi* 'slang (n.)' => *slangahtava* 'slang-ish, resembling slang'
c. *ranska* 'French language' => *ranskahtava* 'French-ish, resembling the French language'
d. *Björk* (Icelandic musician) => *Björkähtävä* 'Björk-ish, resembling Björk'

(16) a. Gradable: *pieni* 'small' => * *pienehtävä*
b. Non-gradable: *kuollut* 'dead' => * *kuolluhtava*

To get a sense of the meaning of *-VhtAvA*, consider example (17). Here, the adjective *rokahtava* 'rock + VhtAvA' is used to mean that the song resembles rock music, has properties/characteristics of rock music. I propose we treat *rokahtava* as a gradable adjective that is true of an individual *x* if the individual is rock-like, i.e., resembles the protype of the noun 'rock' – in other words, has (a sufficient number of) characteristics associated with this prototype.

(17) Musiikki ei ole punkkia, vaan
Music.NOM neg be punk-PAR but
letkeä ja roka-htava biisi. [www]
laid-back.NOM and rock.NOM-ish piece.NOM
'The music is not punk, but rather a laid-back and rock-**ish** piece'

More formally, I propose the denotation in (18) for -*VhtAvA*. This is a function applied to a noun *P* that returns a gradable adjective which is true of an individual *x* if the individual is *P-like*. Intuitively, *P-like* is a function that turns a noun *P* into a scalar predicate expressing degrees of P-likeness. The degrees of P-likeness – essentially, degrees of resemblance to a *prototype*, along contextually-specified dimensions – must be sufficiently high in the positive form for something to count as noun+*VhtAvA* (e.g. for a song to be *rokahtava*). This approach is partially inspired by Sassoon (2017)'s insights regarding nominal contrast comparisons.

(18) $[\![\text{–VhtAvA}]\!]^c = \lambda P_{\langle e,t \rangle} \lambda d \lambda x.P\text{-like}_c\,(d)(x)$

Under this approach, the general notion of 'closeness to a prototype' plays a key role (see also Sassoon 2017 on nominal contrast comparisons, e.g. *This bird is more a duck than a goose*). The notion of conceptual prototypes has been explored by psychologists, philosophers and linguists for decades (e.g. Rosch & Mervis 1975; Rosch 1975; Barsalou 1975; Gärdenfors 2000; 2004; Voorspoels et al. 2012; Sassoon 2013). Today, many in cognitive psychology agree that concepts have a prototypical structure; in other words, that our understanding of concepts (and the words we use to refer to them) is best viewed as mapped onto a similarity space that reflects their closeness to a generic, best example. Under this view, a prototype is the center of a cluster of similar entities (see e.g. Hampton, 2006).

Gärdenfors 2000, 2014 formalizes many of these ideas using the notion of a 'conceptual space,' which provides a distance function that represents properties, concepts, and their similarity relations (see also Gärdenfors & Osta-Vélez 2023: 456). Intuitively, a conceptual space is a set of dimensions relevant to conceptual categorization, and allows us to define the degree to which an entity resembles the protypical value. To borrow a widely-used example (e.g. Sassoon 2017:167): How closely a particular entity x exemplifies a particular category *P* (e.g. *bird*) depends on the distance between x's value and *P*'s (the central protype's) value in each dimension. In the case of birds, these dimensions might include things like appearance, movement, habitat, means of communication etc. Under this kind of approach, the position of an entity in the conceptual space relative to the prototype (i.e., distance from the prototype) indicates whether it is a more or less typical instance of a category (Gärdenfors & Osta-Vélez 2023: 456). Support for the psychological reality of a prototype-based approach comes from work on human categorization and inductive inference (e.g. Rosch 1978, 2011 and many others).

I leave a detailed analysis of the function *P-like* in (18) for future work, but existing work on prototype and conceptual spaces provides a promising foundation.

3.1 Further evidence for a prototype-based approach

In this section, I provide further support for a prototype-based approach to *-VhtAvA.* First, note that prototype theories allow for multiple dimensions to be relevant when defining closeness to the prototype (see also Sassoon 2017, Gärdenfors 2014). Similarly, *-VhtAvA* adjectives are multidimensional. For example, in a context like (17), the adjective *rokahtava* can refer to multiple dimensions: A song can be *rokahtava* due to its beat, another due to its vocals (see also Sassoon 2013; McNally & Stojanovic 2017 on multidimensional adjectives without approximative morphology). The multidimensionality of *-VhtAvA* adjectives is straightforwardly predicted by a prototypicality-based account: an individual can resemble the prototype along different dimensions: the resemblance relation between the prototype of *P* and an individual *x* is underspecified and context-dependent.

Second, the relation between the prototype of *P* and the individual *x* can be metonymic. In addition to examples like (19a), where the adjective expresses degrees of Trump-likeness (proximity to the prototype of Trump) exhibited by people, we also find examples like (19b), where the same adjective expresses degrees of Trump-likeness ascribed not a person but to a behavior. In (b), at face value, 'Trump' and 'behaviors' are ontologically entirely different things; one is a person and one is a behavior. How can we think about the degrees of closeness that a particular behavior (an action) exhibits to the prototype of Trump (a person)?

(19) a. trumpahtavat ukot [www]
trump-ish old men
b. trumpahtavat toimintatavat [www]
trump-ish ways of acting/behaviors

I argue that this apparent tension is resolved as soon as we recognize that (b) as a metonymic use of the noun *trump*, such that the noun *toimintatavat* 'ways of acting/behaviors is interpreted as referring to (something along the lines of) 'the kind of behavior exhibited by Trump.' Thus, in the context in (19b), *trumpahtava*t is interpreted as a gradable adjective which is true of an individual *x* if the individual is sufficiently *P-like*, where *P* is interpreted metonymically to mean 'behavior prototypically exhibited by Trump.' Allowing for metonymy (needed independently of the issues discussed in this paper) enables the prototype-based denotation in (18) to successfully capture examples like (19b) as well.

Related metonymic uses are observed by McCready & Ogata 2007 with adjectival uses of Japanese inferential evidentials, which can be used to indicate

similarity (e.g. *mitai* can be roughly glossed as '-like'). McCready & Ogata note that these expressions can modify nouns and proper names as in (20). They argue that here, 'James Bond' refers metonymically to the 'lifestyle led by James Bond.'

(20) jeemusu bondo mitai-na raifusutairu
James Bond MITAI-Cop.Pres lifestyle
'a James Bond-like lifestyle'

Similar examples can easily be constructed with English *-ish* as well (e.g. *a Tarantino-ish movie*, meaning a movie that resembles the prototypical movie directed by Tarantino), which is entirely expected since we know nouns and proper names in English can be interpreted metonymically.

3.2 Resembling a category prototype without being a member of the category

So far, in our discussion of prototype theory in the general sense, we have been focusing on entities that are members of a certain category. For example, penguins and robins are both members of the category 'bird', though they differ in their distance from the prototype. This brings us to a key observation about the suffix *-VhtAvA*: On the one hand, it is perfectly acceptable to use an adjective derived from noun_i+*VhtAvA* to describe an entity that is *not* itself a member of the category denoted by noun_i. On the other hand, it is also perfectly acceptable to use an adjective derived from noun_i+*VhtAvA* to describe an entity that *is* indeed a member of the category denoted by noun_i.

In this section and the following section I provide examples of both situations, in order to highlight the following: *-VhtAvA* is an element that simply expresses resemblance to a prototype of P, and does not say anything about whether an individual *x* is or is not P. *-VhtAvA* is semantically compatible with both scenarios, and as we will see, different scenarios can trigger different pragmatic inferences.

As shown by naturally-occurring examples like (22a) (from www), the gradable adjective (degrees of P-likeness) derived from *P* can be true of an individual *x* when the predicate *P* does not hold of that individual. Native speaker judgments and examples like (22) both suggest that ***pop****ahtava rock-musiikki* 'pop-ish rock music' can be used to describe rock music that resembles prototypical pop music but is not pop music. Conversely, ***rok****ahtava_popmusiikki* 'rock-ish pop music' can be used to describe pop music that resembles prototypical rock music but is not rock music. (The same is true of English *-ish*, as shown in (22b)).

(22) a. Onko tämä **rokahtavaa** poppia vai **popahtavaa** rokkia saa kuulijat päättää
'whether this is rock-ish pop or pop-ish rock is for the listeners to decide'
b. He's quite a **dog**-ish cat, as he likes being around people and isn't

standoffish. (A cat that resembles prototypical dogs (but is not a **dog**))

This pattern obtains even with even with polar opposites, as in (23). This is from a web forum discussion about whether people believe in UFOs/extraterrestrial life forms. On this discussion board, the term *skepo* 'sceptic' is used for people who do not believe in UFOs, and the term *hörhö* 'crackpot/kook' is used for people who believe in UFOs – in other words, in this context these terms are opposites and pick out non-overlapping sets of individuals.

(23) Olet joko **skep-ahtava** hörhö tai **hörh-ähtävä** skepo [www]
Are.2SG either skeptic-ish crackpot or crackpot-ish skeptic
'You are either a **skeptic-ish** crackpot or a **crackpot-ish** skeptic.'

Nevertheless, it is fine to say *skepahtava hörhö* 'skeptic-ish crackpot,' meaning a crackpot who resembles / has some characteristics of a skeptic, but is not a skeptic, and also to say *hörhähtävä skepo* 'a crackpit-ish skeptic,' meaning a skeptic who resembles a crackpot/has characteristics of a crackpot, but is not a crackpot.

This provides clear evidence that -*VhtAvA* does not say anything about whether an individual *x* is or is not *P*, but rather is simply a function that turns a noun into a gradable adjective that expresses degrees of resemblance to a prototype of *P* (degrees of *P-likeness*). These degrees of *P-likeness* must presumably be sufficiently high – in other words, the distance to prototype along a contextually-relevant dimension must be close enough – to motivate use of -*VhtAvA*, but the individual *x* does not need to be a member of the category *P*.

3.3 Resembling a category prototype while being a member of the category

Although -*VhtAvA* adjectives, expressing degrees of P-likeness, can be true of an individual *x* when the predicate *P* does *not* hold of that individual, -*VhtAvA* adjectives can also be true when *P does* hold of that individual. In examples like (24a-b), we are essentially saying an individual resembles *P* and is *P*.

(24) a. **Popahtava** poppi (www, from poll about type of music to play at event)
'Pop-ish pop'
Pop music that resembles the prototype of pop music (and is pop music)

b. **Juopahtava** juoppo (www, online username)
'Drunkard-ish drunkard'
A drunkard that resembles the prototype of a drunkard (and is a drunkard)

From a communicative perspective, this usage may seem unexpected. In what follows, I explore the intuition that this seemingly redundant use triggers an

inference that the individual *x* is especially close to the prototype. Additional examples are in (25-26). In (25), *ruotsahtava* 'Swedish-ish' is being used to describe clothing that is Swedish. In (26), *rokahtava* 'rock-ish' describes a radio station that is a rock station (so we may also have metonymy in (26)).[4]

(25) Talking about clothing made by the Swedish company Gant (based in Sweden since 1999):
Hyviä puolia: siistin vaikutelman
Good.PL.PAR side.PL.PAR: clean.GEN impression.GEN
antava. Ruots-**ahtava** :D (Nykytilanteessa ei varmaan
give-PRT. Swedish-**ish** :D (Current-situation.INE neg surely
ole huono asia tukea ruotsalaistakaan yritystä. [www]
be bad.NOM thing.NOM support Swedish.PAR.CL firm.PAR
'Good sides: gives a neat impression. Swedish-**ish**. (In the current situation it surely is not bad to support a Swedish company….) "

(26) Julkaisun kunniaksi Suomen rock-kanavista
Announcement.GEN honor/TRA Finland-GEN rock-station-ELA
rok-**ahtav**in, eli Radio City soittaa
rock-**ish**-SUP namely Radio City plays
koko päivän pelkästään Metallicaa [www]
whole day.GEN only Metallica.PAR
'in honor of this announcement, the most rock-**ish** of Finland's rock radio stations, namely Radio City, will play only Metallica the whole day'

I speculate that this type of usage can trigger the inference that an individual *x* has a heightened level of prototypicality. The idea that seemingly redundant expressions can signal a heightened level of prototypicality has a precedent in contrastive focus reduplication, as in (27a-b), from Ghomeshi et al 2004.[5]

(27) a. I'll make the tuna salad and you make the **SALAD-salad.**
b. She wasn't a fancy cow, a Hereford or Black Angus or something, just a **COW-cow.**

Horn 1993 notes that "the reduplicated modifier singles out a member or subset of the extension of the noun that represents a true, real, default, or prototype instance." Similarly, Ghomeshi et al. note that this construction "restrict[s] the denotation of

[4] Note that 'the most rocking' would be *rokkaavin,* i.e., a different form.
[5] Contrastive focus reduplication is considerably more limited in Finnish than English, though forms like *koti koti* 'home home' (e.g. used by students to refer to their childhood home) exist.

a lexical item to its prototype." Similarly, in Finnish, expressions like *popahtava poppi* 'pop-ish pop' can be interpreted as referring to an instance of pop music that is closer to the prototype of pop music than other contextually-relevant instances of pop music. Thus, I speculate that when the *-VhtAvA* adjective, expressing degrees of P-likeness, modifies an individual *x* that is *P* , this can trigger an inference that degrees of P-likeness are higher for x than for other contextually-relevant individuals.

3.4 Resemblance in the absence of category membership: *-mainen*

I argued above that *-VhtAvA* adjectives can be used to describe individuals' resemblance to a prototype of *P regardless* of whether or not the individual *x* is a member of category *P*. In this regard, *-VhtAvA* contrasts with the meaning of another suffix, *-mAinen*, which can be roughly translated as '-like'. This suffix also modifies nouns (e.g. *popmainen* 'pop-like', *kettumainen* 'fox-like', *lasimainen* 'glass-like', *barbimainen* 'Barbie-like', *räikkösmäinen* 'Räikkönen-like'), but, crucially, it strongly implies that the individual described is not or does not 'count as' *P*. For example, a song described as *popmainen* 'pop-like' is not pop music, whereas a song described as *popahtava* 'pop-ish' can be pop-music. Similarly, an animal described as *kettumainen* 'fox-like' is typically not a fox, and a substance described as *lasimainen* 'glass-like' is not glass.

This suffix also has a verbal form *-mAisillAAn,* which expresses that something almosts happens, but ultimately does not happen. This is exemplified in (28), which means that a tree almost fell onto the road, but did not fall.

(28) puu oli kaatu**maisillaan** tielle
Tree.NOM was fall-**maisillaan** road-ALL
'The tree almost fell onto the road.'

Thus, *-mainen* (and its verbal version) strongly imply that the described individual exhibits degrees of P-likeness but is not a member of the category P, whereas *-VhtAvA* simply indicates that the described individual exhibits degrees of P-likeness, independent of whether P actually holds of that individual.

5 Testing two predictions of the proposed analysis

So far, I have provided evidence that two approximative suffixes in Finnish, *-hkO* and *-VhtAvA* differ in terms of whether they target scales involving (a) degrees provided by the adjective or (b) degrees of closeness to a prototype / prototypical properties: *-hkO* signals proximity to a standard on a gradable scale provided by the adjective that *-hkO* modifies, whereas *-VhtAvA* signals proximity to a

prototypical/canonical denotation of the noun that -*VhtAvA* modifies. In this section, I consider two predictions that arise from the denotations in (8) and (18) regarding (i) the availability of superlative and comparative forms, and (ii) the ordering of the suffices when they are stacked.

5.1 Prediction 1: Superlatives and comparatives

According to the denotation in (8), -*khO* takes an adjective (type ⟨d,et⟩) and maps it onto a non-gradable predicate of type ⟨e,t⟩, and thus saturates the degree argument. This predicts that adjectives ending in -*hkO* cannot combine with superlative or comparative morphemes, which quantify over degrees. This prediction is borne out, as shown in (29a-b): Adjectives made with -*hkO* lack comparative/superlative forms. This mirrors English -*ish*, which also cannot modify comparative forms (**more tall-ish*, **tall-ish-er*, Sugawara 2012).

(29) a. *suurehkoin ‘most large-ish’
b. *suurehkompi ‘more large-ish’

This lack of comparative and superlative forms with -*khO* follows straightforwardly from the proposed denotation. In contrast, as shown in (29c-d), adjectives made with -*VhtAvA* have both comparative and superlative forms. The proposed analysis correctly derives this, as -*VhtAvA* yields a gradable adjective of type ⟨d,et⟩ which provides the necessary degree argument for the superlative and comparative morpheme.

(29) c. popahtavin ‘most pop-music-ish’
d. popahtavampi ‘more pop-music-ish’

5.2 Prediction 2: Stacking the suffixes

A second prediction made by the denotations in (8) and (18) concerns the order in which the suffixes can be combined. If -*VhtAvA* outputs gradable adjectives of type ⟨d,et⟩ and -*khO* takes adjectives of type ⟨d,et⟩ and outputs non-gradable predicates of type ⟨e,t⟩, we predict that (i) adjectives output by -*VhtAvA* can be input to -*hkO* whereas (ii) adjectives output by -*hkO* cannot be input to -*VhtAvA*. As shown in (30), this prediction is indeed borne out:

(30) a. rusehtavahko ‘brown+VhtAvA+hkO’ [www]
b. punkahtavahko ‘punk+VhtAvA+hkO’ [www]
c. * ruskeahkohtava ‘brown+hkO+VhtAvA’
d. * punkahkohtava punk+hkO+VhtAvA’

As shown in (30), adjectives output by -*VhtAvA* can be input to *–hkO,* but not vice versa. In other words, *VhAtA + hkO* is fine, but *hkO + VhtAvA* is out.

6 Discussion and open questions

In this paper, I show that two approximative suffixes in Finnish, -*hkO* and -*VhtAvA*, differ systematically in their syntax and semantics. More specifically, I analyze -*hkO* as signaling proximity to a standard on a scale lexically contributed by the gradable adjective that -*hkO* modifies. It targets a degree slightly below the (contextual) standard for the adjective and can modify adjectives whose scales are open, upper bounded *or* lower bounded. However, unlike English -*ish*, -*hkO* cannot modify non-gradable expressions and cannot target scales of precision, which I attribute to the absence of the type-shifting operation that allows -*ish* to express metalinguistic comparisons.

For the other morpheme, -*VhtAvA*, I propose that it signals proximity to a prototype associated with the noun that it modifies. It yields a gradable adjective true of an individual *x* if the individual is *P-like* (sufficiently close to a prototypical exemplar of the noun *P*). Importantly, the relation between individual *x* and predicate *P* is underspecified and highly context-dependent. Furthermore, the gradable adjective expressing degrees of *P-likeness* can be true of an individual *x* both when (a) the predicate *P* does not hold of that individual ('rock-ish pop') and (b) when *P* does hold of that individual ('pop-ish pop') – a pattern which I show differs strikingly from another Finnish suffix -*mAinen*.

My proposed analysis of these two morphemes is supported by evidence from comparative and superlative morphology and from suffix ordering. As regards comparatives and superlatives, I show that -*hkO* adjectives cannot combine with superlative or comparative morphemes, unlike -*VhtAvA* adjectives, which follows from the proposed analyses where -*hkO* saturates the degree argument. As regards suffix order, the proposed analysis correctly predicts that -*VhtAvA* adjectives can be modified by -*hkO* , whereas -*hkO* adjectives cannot further modified by -*VhtAvA*.

Intriguing open questions are posed by color words, which are modifiable by either suffix (e.g. *ruskeahko* brown+hkO, *rusehtava* brown+VhtAvA).[6] Furthermore, 'color+hkO' and 'color+VtAvA' can co-occur without redundancy (31), which supports my claim that the suffixes differ in meaning:

[6] Sometimes morphophonological constraints prevent suffixes from modifying certain color words. As I noted above, it seems that -*hkO* cannot modify words ending in *–(i)nen* in general, which means there are color words that -*hkO* also cannot modify, simply due to morphological reasons, not due their status as color words (e.g. *vihreä* 'green' => *vihreähkö*, but *punainen* 'red' => **punaisehko*).

(31) värikoodeja kuin (...), hailakan punainen, oranssi, **rusehtava**, **ruskeahko** ja/tai punakka [simplified from www]
'…color codes like (….), pale red, orange, **brownish**, **brownish** and/or red'

The fact that both *-hkO* and *-VhtAva* can modify color words may seem surprising, given that, as we saw above, *-hkO* modifies adjectives and *-VhtAvA* modifies nouns. Maybe both suffixes are possible with color words due to (i) color words being potentially ambiguous between nominal vs. adjectival uses (*that red$_{NOM}$ is beautiful* vs. *the red$_{ADJ}$ apple*) or due to (ii) the special semantics of color words (see e.g. Kennedy & McNally 2010, Oltra-Massuet 2017 for related discussion). Indeed, Oltra-Massuet 2017 notes that the behavior of color words with English *-ish* is also unusual. I leave a detailed analysis of color words with these Finnish suffixes for future work.

In conclusion, the present work shows that Finnish uses distinct suffixes depending on scale type, i.e. whether we are talking about proximity to a standard on a gradable scale provided by the adjective modified by *-hkO* or proximity to nominal prototype / prototypical properties provided by the noun modified by *-VhtAvA*. Though the meanings are related, Finnish morphology distinguishes them: different morphemes attach to different bases and target different scales. However, not all languages have morphological elements that wear their scale structure on their sleeve so clearly. Crosslinguistically there exist morphemes that seem very close in meaning, e.g. German *-artig* and *-ähnlich* (e.g. *kaffeeartig* 'coffee-like' and *kaffeeähnlich* 'coffee-like,' Hüning & Schlücker 2023). Thus, a better understanding of the nature of the form-meaning mapping for different kinds of approximative and comparative elements is an important direction for future work.

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