Scalar representations in the semantics of Japanese. From measurements to pragmatics −The case of *dokoroka*−

Szymon Grzelak

ADAM MICKIEWICZ UNIVERSITY IN POZNAŃ

sgrzelak@amu.edu.pl

Abstract

This study looks into the scalar properties exhibited by some grammaticalized (and subsequently pragmaticalized) expressions of Japanese that are lexically based on the noun *tokoro* 'place'. In particular, the argument will be focused on a conjunctive particle *p dokoroka q* 'q, let alone p'. In most cases, both *p* and *q* can be ascribed some pragmatically inferred scalar values reflecting gradable properties, but the assessment of such a common scale is difficult in some cases. We argue that such "non-scalar" instances of *dokoro-ka*, occurring in enumerations, can be represented as cardinalities in the semantic model.

1 Introduction[1]

In this study we analyze a lexically place-based item *tokoro*, focusing on one particular instance, i.e. *p dokoroka q*, which is usually translated as 'q, let alone p'. The analysis is carried out from the viewpoint of its scalarity, i.e. the possibility of semantic analysis by means of ordered sets of values representing intensity of lexical properties.

The paper is organized as follows. Section one introduces some theoretical notions that are of importance to the analysis presented in the subsequent part, in particular, we outline a process of semantic change that results in the conjunctive particle *dokoroka*. Section two briefly summarizes selected studies devoted to various properties of *dokoroka*. Finally, in the last section, we examine some instances of the aforesaid conjunctive particle with respect to their scalar properties.

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[1] I am grateful to the audience gathered at the International Conference on Asian Linguistics held in Ho Chi Minh City for fruitful discussion. I am also very indebt to Kazuya Inagaki, Joachim Kolb and Syuntaroo Tida for several insightful remarks. All remaining errors and inconsistencies are solely mine.

1.1 Meaning shift

In an earlier study (Grzelak 2014), we argued for the existence of a three-staged process of meaning shift observed in lexical items, which have a degree component in their semantic structure[2]. In course of the change, grammaticalization is followed by pragmaticalization and subjectification, in the sense of Traugott (2010) and the related line of research. The meaning shift can be exemplified as follows:

Stage 1   takai kurai-ni   tuku   →
            high   rank-DAT   assume
            'To assume a high rank.'

Stage 2   motenai   kurai   omoi →
            cannot.carry   degree   heavy
            '[it is] so heavy that I cannot carry it'

Stage 3   otya kurai   zibun-de   irenasai
            tea degree   by.yourself make-IMP
            'Make at least [your own] tea by yourself!'

In the first stage, *kurai* is a "full-fledged" noun, capable of playing the role of a syntactic head, as in the above example. In the second stage, *kurai* (freely varying with its voiced variant *gurai* in the two latter stages) plays the role of a degree adverbial, deprived of the lexical meaning present in the preceding stage. Finally, in the third stage, it begins to bear a pragmatic input, such as stance marking, as can be seen in the third example above, uttered with certain impatience. What is worth noting, the degree-based particles can be given scalar semantic representations on each stage of their development, due to their lexical motivation.

In the case of *tokoro*, the above stages could be illustrated as follows:

Stage 1   *(kaban-o   oi-ta)*   *tokoro* (spatial noun) →
            (bag-ACC   put-PAST) place
            'The place I put my bag.'

Stage 2   *okonat-teiru   tokoro* (temporal) →
            carry.out-PROG tokoro
            '(something is) being carried out'

Stage 3   *bentu   dokoroka zitensya sae   kaenai*   (pragmatic)
            Mercedes   dokoroka bicycle   even buy.cannot
            'I cannot even afford a bicycle, let alone a Mercedes Benz.'

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[2] In the current stage of the inquiry we do not possess sufficient diachronic evidence that could corroborate claims about the historical development of the above stages. The present study is synchronic in nature, based on various forms coexisting in contemporary Japanese.

Tokoro in the first stage is a noun referring to a location in space, capable of taking modification by attributive sentences. Its grammaticalized form in the second stage is an expletive noun denoting a point (or range) in time without any reference to the physical space. Finally, as a part of the complex expression *dokoroka*, *tokoro* contributes to marking speaker's attitude, such as frustrated expectation or emphasis of a large difference between *p* and *q*.

2   Previous research on *dokoroka*

In one of the initial accounts (apart from earlier lexicographical descriptions), Chu (1980) provides the following characteristics of *dokoroka* with three possible patterns: (i) in the combination of P and Q that are mutually exclusive and contrary to each other, P is negated and Q is emphasized, (ii) P and Q are of different degrees, the degree of P is negated and the higher degree of Q is emphasized, (iii) a high-degree P is overtly negated (by means of *...dokoroka ...nai*) and Q that is of extremely low degree is emphasized. This analysis was criticized by Hattori (1995) who pointed out that the classification can be confusing, it does not cover several instances and that the formal marking of negation (or absence thereof) is not relevant to the semantic analysis. Also, the antonymy and mutual exclusion of P and Q, postulated in (i), can actually render some sentences with nongradable properties odd (*Kare wa dokusin dokoroka kekkon siteiru.* 'He is not just single, he is married'). Moreover, the notion of emphasis used in (i)-(iii) above, cf. also Zhang (1993), is too vague to possess any explanatory power. According to Hattori (ibid.: 42), in the P *dokoroka* Q[3] construction the appropriateness of P is denied, and some Q is inferred that is located outside the pair "P vs. p" (p: an affair that commonly comes to mind as negation of P). Assuming the direction from P to p (in terms of degree ordering), Q is considered to have a higher degree than P; in the case of p to P direction, Q is considered to be of higher degree than p. In Hattori (2005), the relation between the meaning of P *dokoroka* and P *dokorodewanai* has been further analyzed.

In the existing studies, *dokoroka* is classified as a pragmaticalized adverbial or a conjunctive particle. It can be considered an instance of metalinguistic negation (Horn 2001) realized by means of a voiced variant of the expletive noun *tokoro* and a modal particle *ka* marking interrogativity or conjecture. The speaker challenges the degree that can be inferred from *p* and, instead, claims it to be some value *q*, fairly remote from *p* (Masuoka and Takubo 1992, Hattori 2006). A very important aspect of *dokoroka*, the notion of expectation, discussed in the following section, was already treated in (Kawabata 2014). According to the author, 'the value of Q is the opposite of the direction of expectation on the scale of the degree of expectation presumed when p is set' (ibid.).

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[3] Capital letters were used by Hattori to represent the arguments of *dokoroka*, whilst small caps marked their inferred negation.

In another study, Sato (2012) discusses how the prosodic properties of expressions linked with *dokoroka* affect the syntax of such complex sentences. The author argues that in sentences where the combination of *q* and *dokoroka* is accented, *dokoroka* plays the role of a coordinate conjunction joining IPs; in the cases where accent is not preserved, *dokoroka* joins zero-level categories.

3 Scalarity of *dokoroka*

In this section we look at some instances of '*p dokoroka q*' in order to examine the scalarity of its arguments. Scalarity of *p* and *q* can originate from their semantic structure, in the sense of being primarily or secondarily numerical (Rusiecki 1985) i.e. having some underlying scale graded with units of measurement such as meters, kilograms or points, or the relevant scale needs to be inferred pragmatically.

(1) a. *(Rieki-wa)   zero dokoroka mainasu desu.*
     (profit-TOP) zero dokoroka negative COP
     'The profit is not just zero. It is negative.'

   b. *Me-o   akeru to,   nagarebosi wa, kieru   dokoroka,*
     Eye-ACC open when falling.star TOP disappear dokoroka
     masumasu   ooki-ku   nat-tei-ta.
     increasingly big-ADV   become-PROG-PAST
     'When I opened my eyes, the meteor not only had not disappeared. Rather, it had grown bigger and bigger.'

   c. *Hetana nagusame-no   kotoba   nante, yakunitatanai dokoroka*
     sloppy   consolation-GEN word   PART   useless   dokoroka
     sarani   kizutukete-simau kamosirenai.
     even.more   hurt-PERF   maybe.
     'Sloppy consolations are not just useless, they can hurt even more.'

                              [KOTONOHA]

In the above examples various scales representing semantic properties are involved. (1a) is based on a straightforward scale representing the amount of financial resources the value of which can turn negative in case of losses. In (1b), the underlying scale represents size of a shooting star. Finally, in (1c) there is some pragmatically inferred scale indicating the extent of emotional damage. The latter type of scalarity ('secondary scalarity' in Rusiecki's terms) can be found in a variety of semantic domains, such as taste (Backhouse 2005, 103–25):

(2) *Umi- no   mizu-wa   syoppai?*
   sea -GEN   water-TOP salty
   'Is sea-water salty?'

Syoppai   dokoroka   siokarai.
salty   dokoroka   salt.pungent
'Far from being (just) salty, it's salt.'

(3) *Karee-wa   piritto-siteru?*
     curry-TOP   piquant-do-PROG
     'Is curry piquant?'

     Piritto-si-teru   dokoroka   karai.
     piquant-do-PROG   dokoroka   hot
     'Far from being [just] piquant, it's hot.'

(Backhouse 2005, glossing and transcription by the author)

The above sentences show that *siokarai* and *syoppai* can be ascribed a common scale, but as Backhouse observes, they should be interpreted as contrast terms 'denoting the quality of saltiness, but in different intensities' (ibid.: 103).

Pragmatically inferred scale of expectation.
The pragmatic effect of *dokoroka* is bound to the notion of expectation. It can appear as part of the rhetoric strategy of counter-expectation (Elizabeth C. Traugott 1999). The examples presented so far demonstrate that Q can be unexpected by (i) varying to a big extent from P, (ii) being of opposite direction on the scale (non-monotonicity), or by (iii) being something non-homogeneous with P, as in the following example:

(4) *Koohaku   dokoroka,   ko   aku utagassen   zyanai-ka.*
     red.and.white   dokoroka,   old   bad song.competition   COP.NEG-Q
     'Is it Red-vs.-White or maybe rather Old-vs.-Bad? [New Year Eve song competition produced by the NHK public broadcaster].'

(Kawabata 2014: 72)

This sentence, relevant to the argument in the following section, clearly does not have any underlying scale in its semantic structure. The role of *dokoroka* seems to be tantamount to introducing a base for negation as part of a rhetorical figure.

As far as the notion of expectation is concerned, *dokoroka*, being pragmatically marked, with the reservations voiced by Haspelmath (2006), triggers an expectation of something unexpected. As a result, predictable Qs, such as simple polar antonyms of P, tend to be unnatural due to their very predictability. This intuition is reflected in other accounts (e.g. being too 'obvious' in Hattori 2005).

(6)   a. #*Nagai   dokoroka   mizikai.*
         long   dokoroka   short
         '# It's not long. Far from that: it's short.'

Interestingly, however, sentences as (6a) can be significantly amended by means of adverbs. For example:

(6)   b. *Nagai   dokoroka   totemo   mizikai.*
         long   dokoroka   very   short
         ' It's not long. Far from that: it's short.'

A possible explanation would be that the addition of an intensifier in (6b) fulfills the condition mentioned in 1.1 of p and q being far apart from each other.
    A similar constraint holds for non-gradable antonyms, which can only default to either end of "two-state" scales:

(7)   #*Iki-teiru   dokoroka, sin-deiru.*
         live-PROG   dokoroka die-PROG
         '#He's not alive. Far from that, he's dead.'

One important reservation is that in the semantics of degrees, scales are determined contextually (apart from expressions such as '10 cm' that are not context-sensitive). That is why in the case of *dokoroka* what is "fairly remote" depends on the context and is determined for a given class of objects (Kennedy and McNally 2005). For example:

(8)   *9 byoo   dokoroka   10 byoo   sae   muri   da.*
       9 second dokoroka   10 second even   impossible COP
       'Not just 9 seconds, even 10 seconds wouldn't be possible.'

The one-second difference in the above example is marginal or negligible in everyday life (if it referred to the length of a lecture or travel), but can be quite significant in sport or physics.

Scalarity of *tokoro*
As far as the scalarity of complex degree expressions containing two or more scalar arguments is concerned, there are two possible configurations: (i) the adverbial or connective itself has scalarity in its semantic structure, for example "a *wa* b HODO (*dewanai*)" (same for *bakari, gurai, teedo* and others), or (ii) they are semantically not related to the notion of scalarity, e.g. 'a *is longer* THAN b', 'a *is* AS *tall* AS b'. In the latter examples, *than* originates from *then*, and *as* derives its etymology from Old English *alswa*, lit. 'all so'. As will be shown below, the question about the proper assigning of 'a DOKOROKA b' to the above dichotomy poses certain difficulties.
    As mentioned in 1.1., adverbials such as *hodo* or *kurai/gurai* are inherently scalar due to their lexical motivation, i.e. being related to nouns the

semantic structure of which is based on the component of 'degree'. In the case of *tokoro* 'place', the scalarity is not always straightforward. Even though the non-grammaticalized, spatial noun *tokoro* can refer to places in space that are linearly ordered on some scale, much more often it requires two (or three) scales to determine the coordinates X,Y,(Z) which imposes cognitive burden and makes it hard to process, similarly to the complex dimensional/quantitative adjectives such as *big*. One can conjecture that some instances of grammaticalized *tokoro* can be given scalar representations (e.g. in its temporal function, e.g. *tabeteiru tokoro* 'just eating (now)') whilst others cannot, as is the case with *tokoro-de*, a topic-shift expression, or *tokoro-ga*, an adversative discourse marker. It is worth noting that the temporal *tokoro* and *tokoro-de* do not reach the stage of subjectification, playing, respectively, the grammatical (temporal/nominalizer) and discourse organizing roles. Also, the question arises whether the three-stage semantic change of degree-based nouns outlined in 1.1. was facilitated by scalarity. So far, no definite claim can be made about scalarity as a factor facilitating the grammaticalization of tokoro, similarly to metaphor. *Tokoro*, which is not always scalar, may or may not reach the stage of subjectification.

As far as the possible arguments of *dokoroka* are concerned, the following expressions (or their negations) are possible: verbs, adjectives (morphological and adjectival nouns), nouns, quoted sentences, anaphoric connectives (e.g. *sore* referring to the preceding context).

(9) *"Ni'i   zya   dame   nan-desyoo-ka?" dokoroka*
     second.rank COP.TOP no.good PART-MOD-Q   dokoroka
     nihonsei   supakon   yon'i.
     made.in.Japan supercomputer fourth.rank
     '"What's wrong with being number two?" is not the question. The Japanese supercomputer was fourth in the ranking.'

(10) *"Kore-wa keezi   dorama   ka?" dokoroka*
      This-TOP detective drama   Q   dokoroka
      "somosomo, kore-wa dorama   nanoka?"
      first.of.all this-TOP drama   PART-Q
      'The question is not just if this is a police drama, but whether it is a drama at all.'

Although the first sentence does contain scalar nouns 'rank' the scale applicable here is in fact 'admissibility of a question'.

On the sentence/paragraph level, scales can be hard to determine unambiguously.

(11) *Sin-eba,   hutatabi tenka-ni umare-tekuru hosyoo-wa   nai.*
      die-COND   again   world-DAT born-ASP   guarantee-TOP be.NEG

> *Sore dokoroka,   zigoku-ni   massakasama...*
> that dokoroka   hell-DAT   quite.inversely
> *toiu   koto mo nai-de-wa-nai.*
> COMPL NMLZ too be.NEG-COP-TOP-NEG
> '[...] when we die, there is no guarantee that we will be reborn in this world. What is more, it is not excluded that we might end up in hell.'
>
> [KOTONOHA]

The three possibilities that come to mind here would be scales representing the level of guarantee, hell/heaven hierarchy or just negation, but due to the high level of idiosyncrasy, no testing procedure for the type of scale can be established.

Dokoroka in enumerations

Apart from non-scalar instances such as example (4), there is a distinct group of sentences where ascribing a common scale to p and q poses significant difficulty.

(12)   *Taroo-wa piano dokoroka, otya-mo kyuudoo-mo yat-teiru.*
       Taro-TOP   piano dokoroka tea-too   archery-too   do-PROG
       'Taro doesn't just play the piano, he also does tea ceremony and archery.'

There is no obvious common parameter that would allow for scalar ordering among the elements of the above set, i.e. playing piano, practicing tea ceremony and archery[4]. The scale (a harness of possible scales) can be derived from some factors that are external to the situation described in the sentence. In quantitative terms, in the case of such "enumerative" *dokoroka,* the number of antecedents (q) must be greater that two. Enumerations with only one additional item are perceived as unnatural.

(13)   *Taroo-wa piano dokoroka, otya-mo yat-teiru.*
        Taro-TOP   piano dokoroka tea-too   do-PROG
        #'Taro doesn't just play the piano, he also does tea ceremony.'

The above sentence is odd, since the required number of items is smaller than three. Alternatively, such enumerations can be treated merely in terms of cardinality where the number of items is greater than two. However, if the anteceding element is unexpected or fairly remote in terms of degree of some lexical property, the sentence can be saved even with two items.

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4 Another possibility was pointed out to me by Joachim Kolb. It might be conceivable that Taro is not at all into new-fangled Western art forms such as the piano, but heavily into traditional Japanese ones, such as archery and tea. The possible reading in such case would be "Far from going in for gimmicks such as the piano, he actually practices both archery and the tea ceremony."

(14) *Taroo-wa piano dokoroka, utyuuhikoosi mo/made   yat-teiru.*
      Taro-TOP   piano dokoroka astronaut   too/as.much.as do-PROG
      'Taro doesn't just play the piano, he is also an astronaut.'

In this sentence, the scalar structure is switched to some parameter of the lexical meaning, but its identification is fairly ambiguous.

As can be seen from the following example, *dokoroka* can take arguments that are overtly cardinality-based, containing e.g. numerals with classifiers.

(15) *Bunkei-no   gakusei nitotte wa   issya   dokoroka*
      humanities-GEN student for   TOP   one.company dokoroka
      zyussya,   nizyussya   no   husaiyoo mo
      ten.companies twenty.companies GEN   rejection too
      mezurasiku-nai   daroo.
      rare-NEG   MOD
      'For a humanities student, being rejected by not just one company,
        but even ten or twenty is nothing unusual.'

The number of companies can be straightforwardly represented by means of a scale without any pragmatic inference.

4 Summary

In the argument presented above, we tried to shed some light on two issues. First, the existence of a semantic change was proposed, in which place-based noun *tokoro* evolves from a full-fledged lexical item that can play the role of syntactic head towards grammaticalized expletive form that can undergo a subsequent stage of pragmaticalization/subjectification (typically: emphasis, attitude marking, rhetorical, figures of speech, etc.). Second, we focused on a complex conjunction, *dokoroka,* typically assumed to trigger some scalar inference. There are however some instances of *dokoroka* in the case of which assigning an appropriate scale can be fairly challenging. We argued that such sentences are in fact enumerations conveying cardinalities of sets of homogeneous objects rather than comparisons of (fairly remote) degrees.

We observed that *tokoro* is not inherently scalar due to its three-dimensional spatial motivation, even though it might be possible to propose a topology ordering places in a space from left to right or according to the distance from some center point. Interestingly, some grammaticalized *tokoro* can be given scalar representations, as is the case with its temporal grammaticalized form.

In conclusion, some (inter-)subjectified discourse markers in Japanese are the final result of a three-stage meaning shift. All degree-based markers are scalar. Some place-based markers can be scalar. The expressions exhibit various kinds of scalarity – scalar values, scale of expectation, mul-

tiple scales available in the interpretation process. Unlike *kurai/bakari/hodo,* that can play the role of pragmatically neutral degree adverbs, *dokoroka* inherently contributes some pragmatic input.

The claims presented in this study were based solely on the synchronic evidence. In the course of further research, the history of the meaning shift discussed here needs to be elucidated based on empirical evidence from historical corpora.

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Index of glosses

ACC   accusative
ADV   adverbial form
ASP   aspectual marker
COMP complementizer
COP   copula
DAT   dative
GEN   genitive
IMP   imperative
MOD   modality marker
NEG   negation
NMLZ nominalizer
NOM   nominative
PART   particle
PAST   past form
PERF   perfective form
PROG progressive form
Q   interrogative particle
TOP   topic particle