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Or, *Wh-* and Not: Free Choice and Polarity in Malagasy

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This paper explores the distribution of Free Choice Items (FCI) and Negative Polarity Items (NPI) in Malagasy. Both FCIs and NPIs in Malagasy are syntactically complex: they are expressed by disjunctions of *wh*-words. It is shown that this morphosyntactic structure directly reflects their semantics. In other words, FCIs and NPIs are semantically as well as syntactically disjunctive. Moreover, the Malagasy data support analyses of disjunction as a polarity sensitive element.

1. INTRODUCTION

As seen in (1), Malagasy (Western Austronesian) uses the same element for Free Choice Items (FCI) and Negative Polarity Items (NPIs).

(1) a. **Free Choice Item**
      Na inona na inona   mahatahotra   azy.
      or what   or what   CAUSE.fear   3(ACC)
      'Anything can frighten him.'

   b. **Negative Polarity Item**
      Tsy matahotra na inona   na inona   izy.
      NEG fear   or what   or what   3(NOM)
      'He fears nothing.'   [Dez 1990: (1865), (1837)]

This overlap between FCIs and NPIs is not unusual – consider English *any* (see Haspelmath 1997 for examples from several other languages). What is striking about the Malagasy data, however, is that FCIs and NPIs are made up of a *wh*-element (e.g. *inona* 'what') and the disjunction marker *na*. Thus the equivalent of *anything* is literally *or what or what*; *anyone* is *or who or who*, etc.

   The main objective of this paper is descriptive rather than theoretical. I begin in section 2 with some relevant background on Malagasy syntax. In sections 3 and 4 I lay out the distribution of FCIs and NPIs in Malagasy. Section 5 discusses the implications for theories of these elements. In particular, I show that the Malagasy data support the hypothesis that disjunction is inherently polarity sensitive (Higginbotham 1991, Amritavalli 2003). Disjunction in the scope of negation gives rise to an NPI while disjunction in the scope of a modal or generic leads to the FCI interpretation. Although I point out these connections to the theoretical literature, a more

thorough analysis of the Malagasy data awaits future research. Section 6 concludes and identifies some of the remaining questions.

2. MALAGASY

Malagasy is a VOS language spoken in Madagascar. The example in (2) illustrates this order and also shows that certain adverbials (e.g. temporal) typically appear after the subject.[1]

(2)   Nividy   trondro   tany   Ambohibao izahay   tamin'ny Talata.
       buy   fish   there Ambohibao 1PLEX(NOM) with'DET Tuesday
       'We bought fish in Ambohibao on Tuesday.'   [Rajemisa-Raolison 1971: 89]

Although the word order is fairly rigid, preverbal subjects are possible, marked off from the remainder of the sentences with the particles *dia* (topic) or *no* (focus).[2]

(3)   a.   Ny mpianatra dia   mamaky   teny.
           DET student   TOP   read   word
           'The students, they are reading.'

      b.   Ny mpianatra no   mamaky   teny.
           DET student   FOC   read   word
           'It is the students who are reading.'   [Rajemisa-Raolison 1971: 30]

Two aspects of Malagasy grammar are relevant to this paper: disjunction and quantification. There are two disjunction markers, *na* and *sa*. Simplifying somewhat, *na* is the all-purpose disjunction while *sa* is reserved for alternative questions.

(4)   a.   Manorata na mamakia   boky.
           write   or read   book
           'Either write or read a book.'

      b.   Hijanona   ianao   sa handeha?
           stay   2SG(NOM) or go
           'Will you stay or go?'   [Rajemisa-Raolison 1971: 148-149]

Turning now to quantification, Malagasy has no quantificational determiners. To express the equivalent of 'each', 'every', 'some', the grammar employs adjectives and adverbs. In other words, Malagasy has A-quantification rather than D-quantification. Crucially for this paper,

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[1] Unless otherwise indicated, all data are from my own fieldwork with native speakers.
[2] Sometimes preverbal subjects are not overtly marked, e.g. (1a). In these cases, there is usually an intonational pause between the preverbal subject and the remainder of the sentence.

Malagasy also lacks a determiner equivalent to 'no' – instead disjunction+*wh* is used (plus sentential negation). We have already seen an example in (1b); a further example is given in (5).

(5) Na saka inona na saka inona dia tsy mihaza alika.
    or cat what or cat what TOP NEG hunt dog
    'No cat hunts dogs.'

As illustrated in (1a) and (6), FCIs also use disjunction+*wh*. Comparing (5) and (6) we see that the crucial difference is the presence of negation *tsy* in (5).

(6) Na saka inona na saka inona dia mihaza voalavo.
    or cat what or cat what TOP hunt rat
    'Any cat hunts rats.'

Note that these disjunctive *wh*-phrases are not simple existential indefinites – for such indefinites, the existential construction (7a) or common nouns *zavatra* 'thing' or *olona* 'person' (7b) are used.

(7) a. Misy mandondona ambaravarana.
       exist knock at-door
       'Someone is knocking on the door.'

    b. Nahita zavatra ve ianao?
       see thing Q 2SG(NOM)
       'Did you see something?'   [Dez 1990: (1207), (1251)]

As a final point, the precise form of NPIs and FCIs can vary. Dez (1990) gives the following examples of possible orders when the disjunctive *wh*-phrase is combined with a common noun, in this case *mpivarotra* 'merchant'.

(8) a. na iza na iza mpivarotra
       or who or who merchant

    b. na iza mpivarotra na iza mpivarotra
       or who merchant or who merchant

    c. na mpivarotra iza na mpivarotra iza
       or merchant who or merchant who

    d. ny mpivarotra na iza na iza
       DET merchant or who or who
       'whichever merchant'   [Dez 1990: (1834)]

I assume that all of these forms are semantically equivalent and set aside for future research a more in-depth analysis of their structure.[3]

Summing up, the data in (5) and (6) above show that Malagasy patterns with many other languages (Haspelmath 1997) in using the same lexical item for both NPIs and FCIs (cf. English *any*). As mentioned above, what distinguishes Malagasy from English is the presence of an overt disjunctive morpheme *na*. In the next sections, I provide an overview of the distribution of FCIs and NPIs in Malagasy, before turning to the significance of disjunction.

3. FREE CHOICE

As in English and other languages, FCIs in Malagasy are limited to particular contexts: modals (e.g. *maha-* in (9a)), imperatives (9b), conditionals (9c), generics (9d).

(9)   a. Na inona na inona   mahatahotra azy.
          or what   or what   CAUSE.fear   3(ACC)
          'Anything can frighten him.'

    b. Ento aty   ny mpianatra na firy   na firy.
          bring here DET student   or how-many or how-many
          'Bring here however many students there are.'

    c. Na iza na iza no   milaza izany, aza   inoana.
          or who or who FOC   say   that,   NEG   believe
          'If anyone says that, don't believe it.'

    d. Na saka   inona na saka   inona dia mihaza   voalavo.
          or cat   what   or cat   what   TOP hunt   rat
          'Any cat hunts rats.'

FCIs are therefore not allowed in episodic sentences (cf. (9a)).

(10) *Na iza na iza   manao izany.
        or who or who   do   that
        *'Anyone is doing that.'

Unlike in English, however, FCIs in Malagasy are not licit in embedded questions or comparatives.

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[3] I don't know, for example, if it is possible to have a three-way disjunction+*wh* or whether it is possible to have two different lexical heads and retain the FCI/NPI interpretation.

(11)   a. *Manontany tena   aho   raha   tonga na iza na iza.
           ask   self   1SG(NOM) if   come or who or who
           'I wonder if anyone came.'

        b. *Lehibe   kokoa Rabe   noho   na iza   na iza mpianatra.
           big   more Rabe   than   or who   or who student
           'Rabe is bigger than any student.'

Thus other than the difference illustrated in (11), Malagasy and English FCIs pattern together.

4. NEGATIVE POLARITY

NPIs in Malagasy can be in any position when the main verb is negated: subject (12a), object (12b), adjunct (12c).

(12)   a. Tsy mahatakatra izany   na iza na iza.
           NEG CAUSE.reach that   or who or who
           'No one can afford that.'
           (lit.) 'Anyone can't afford that.'

        b. Tsy matahotra na inona   na inona   izy.
           NEG fear   or what   or what   3(NOM)
           'He doesn't fear anything.'

        c. Tsy hitako   na aiza   na aiza   ny ondriko.
           NEG find.1SG   or where   or where   DET sheep.1SG
           'I can't find my sheep anywhere.'

Although subject NPIs are possible (12a), they are limited in distribution, as seen in (13a,b).[4] To express the intended meaning, a negated existential construction is used instead, as in (13c). Note that the presence of the NPI in (13c) is optional.

(13)   a. *Na iza na iza   tsy   nanongo an'i Koto.
           or who or who   NEG   pinch   ACC'Koto
           'No one pinched Koto.'

        b. *Na iza na iza   tsy   marary.
           or who or who NEG   sick
           'No one is sick.'

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[4] Changing the word order in (13a,b) does not affect grammaticality.

    c. Tsy misy marary (na iza na iza).
       NEG exist sick   or who or who
       'No one is sick.'

Subject NPIs seem to have the same licensing conditions as FCIs; for example, they are licensed by modality, as in (14).

(14)   Na iza na iza   tsy   mahatsongo   an'i Koto.
       or who or who   NEG   CAUSE.pinch   ACC'Koto
       'No one can pinch Koto.'

Finally, as in English, NPIs can also be licensed by negative verbs, such as *manda* 'deny'.

(15)   Nanda aho   fa mahatakatra izany na iza na iza.
       deny   1SG(NOM) C   CAUSE.reach that or who or who
       'I denied that anyone can afford that.'

Thus NPIs in Malagasy are quite similar to NPIs in English, with the added wrinkle that they are possible in the subject position (subject to some restrictions).

    At this point, we see that FCIs and NPIs in Malagasy appear to have a "normal" syntactic distribution. Clearly more research is needed to determine the precise distribution of these elements, but for present purposes I assume that whatever licensing conditions apply to English FCIs and NPIs also apply to their Malagasy equivalents. I now turn to a discussion of how the morphosyntactic form of FCIs and NPIs in Malagasy relates to their interpretation.

5. WHY DISJUNCTION?

As we have seen, both FCIs and NPIs are complex elements in Malagasy, made up of a disjunction marker *na* and a *wh*-phrase. I propose that disjunction plays an important role in determining the interpretation of these elements. Moreover, the polarity-sensitivity of NPIs and FCIs arises, I claim, due to the presence of disjunction.

    Turning first to FCIs, it has been argued in the literature that FCIs are a special kind of indefinite (Jespersen 1933, Vendler 1967, Jackendoff 1972, Horn 2000, Giannakidou 2001). For these researchers, FCIs are indefinites that invoke indiscriminate choice. In fact, Jackendoff (1972) and Jayaseelan (2001) explicitly claim that the meaning of *any* as disjunctive (*this or this or this or…*). This interpretation is sometimes referred to as "infinite disjunction". The Malagasy data support this analysis given that disjunction is overtly marked in FCIs. But is there more to the role of disjunction in an FCI?

Researchers have long thought that disjunction is either a polarity item itself or related to polarity. For example, Higginbotham (1991) considers examples such as (16), where disjunction can be interpreted as conjunction.[5]

(16)   John plays chess or checkers (so he'll play whichever you please)

To account for the dual interpretation of *or*, Higginbotham proposes that *or* is always accompanied by *either*, which can be either null or overt. For Higginbotham, *either* patterns with *any*: its interpretation depends on the licensor. The NPI-type licensing leads to a disjunctive reading; the FCI-type licensing leads to a conjunctive reading. The details of this analysis are not important for the purposes of this paper. What is crucial is the link between disjunction and polarity. This link is supported by the fact that Malagasy uses overt disjunction to create polarity items.

Turning now to the meaning of *any*, Lee and Horn (1995) argue that the semantics of *any* combines indefiniteness and *even*. In other words, *any* is associated with a scale. The Malagasy disjunction *na* also appears to be associated with a scale[6] – it is used in conjunction with the particle *aza* to mean 'even':

(17)   a. Tonga ihany   aho,   na mangatsiaka   aza   ny andro.
           arrive only   1SG(NOM) or cold   even   DET day
           'I arrived even though it was cold.'

       b. Na Rabe aza   dia dokotera.
           or Rabe even TOP doctor
           'Even Rabe is a doctor.'

The same morphemes (*na* 'or' and *aza* 'even') are also used in the NPI 'not even a single':

(18)   a. Tsy namaky   na boky iray aza   ny mpianatra.
           NEG read   or book one even   DET student
           'The student didn't read even a single book.'

       b. *Namaky   na boky iray   aza   ny mpianatra.
           read   or book one   even   DET student
           'The student read even a single book.'

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[5] For discussion of the connection between disjunction and polarity in Hungarian, see Szabolcsi (2002, 2004) and Szabolcsi and Haddican (2004).

[6] See also Kratzer and Shimoyama (2002); *na* may in fact be what they call a "domain widener".

These data indicate that although disjunction turns up in many different contexts in Malagasy, these contexts can be united under the umbrella of polarity.[7]

Finally, Ludlow (2002) explores a very different connection between polarity and disjunction. His starting point is the logical inferences associated with certain lexical elements. Based on these, he argues that the determiner *no* has features (disjunction and negation) that must be checked off by the appropriate functional heads (Conj° and Pol°). What is striking in the context of the Malagasy data is that in order to express the equivalent of *no*, Malagasy morphosyntax has recourse to the very elements that Ludlow posits as features: disjunction *na* and negation *tsy*. Once again, Malagasy provides overt evidence in favour of features that have been posited to occur covertly in English.

6. CONCLUSION

Data from Malagasy FCIs and NPIs show that this language expresses in the overt syntax elements that have been posited in the semantics (e.g. disjunction + negation = 'no'). These data thus support analyses connecting disjunction to polarity. Moreover, data from Malagasy provide evidence in favour of the indefinite analysis of FCIs (Horn 2000, Giannakidou 2001): disjunctive *wh*-phrases are clearly indefinite. Thus although I have not provided an explicit syntactic or semantic analysis of FCIs and NPIs in Malagasy, I hope to have convinced the reader that these data are relevant to current issues in the analysis of polarity.

There remain, of course, many open questions. First, if we accept that FCIs and NPIs are indefinite, why are they often topicalized?

(19) a. Na saka   inona na saka   inona dia tsy   mihaza   alika.
          or cat   what   or cat   what   TOP NEG   hunt   dog
          'No cat hunts dogs.'

      b. Na saka   inona na saka   inona dia mihaza   voalavo.
          or cat   what   or cat   what   TOP hunt   rat
          'Any cat hunts rats.'

Second, grammars and dictionaries often give examples where *na* means 'and'.

(20)   Samy mamy na ny ray   na ny reny.
         each   sweet or DET father or DET mother
         'Fathers and mothers are both dear.'   [Rajemisa-Raolison 1971: 148]

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[7] It is well known that disjunction markers in many languages are used for yes-no questions and to create indefinites out of *wh*-phrases (Haspelmath 1997; see Borzdyko 2004 for a unified analysis of Belorussian *ci*, based on the notion of indefiniteness). Malagasy *na*, however, is not a question particle (matrix or embedded).

In (20) the quantificational adjective *samy* 'each' could be argued to induce a conjunctive interpretation, but speakers consistently translate the following sentence with 'and' rather than 'or':

(21) Miteny   frantsay   na   i Piera   na i Paoly.
      speak   French   or   Pierre or Paul
      'Pierre and Paul both speak French.'

Given that the difference between 'and' and 'or' is not always easy to elicit, this conjunctive use of *na* requires careful further research.

<div align="center">REFERENCES</div>

AMRITAVALLI, R. 2003. Question and negative polarity in the disjunctive phrase. *Syntax* 6: 1-18.

BORZDYKO, OXANA. 2004. *La disjonction, l'indéfinition et l'interrogation : la particule* ci *du biélorusse*. PhD thesis, London, Canada: University of Western Ontario.

DEZ, JACQUES. 1990. *Cheminements linguistiques malgaches*. Paris: PEETERS/SELAF.

GIANNAKIDOU, ANASTASIA. 2001. The meaning of free choice. *Linguistics and Philosophy* 24: 659-735.

HASPELMATH, MARTIN. 1997. *Indefinite pronouns*. Oxford: Clarendon.

HIGGINBOTHAM, JAMES. 1991. Either/or. In T. Sherer (ed.). *Proceedings of NELS 21*, pp. 143-155. Amherst, MA: GLSA Publications.

HORN, LAURENCE. 2000. *Any* and (-)*ever*. Free choice and free relatives. *Proceedings of IATL 15*: 71-111.

JACKENDOFF, RAY. 1972. Any vs. every. *Linguistic Inquiry* 3:119-120.

JAYASEELAN, K. A. 2001. Questions and question-word incorporating quantifiers in Malayalam. *Syntax* 4: 63-93.

JESPERSEN, OTTO. 1933. *Essentials of English grammar*. London: Allen and Unwin.

KRATZER, ANGELIKA and JUNKO SHIMOYAMA. 2002. Indeterminate pronouns: The view from Japanese. Paper presented at the 3rd Toyko Conference on Psycholinguistics.

LEE, YOUNG-SUK and LAURENCE HORN. 1995. *Any* as indefinite plus *even*. Ms, Yale University.

LUDOW, PETER. 2002. LF and natural logic. In G. Preyer (ed.). *Logical form, language and ontology*, pp. 132-168. Oxford: Oxford University Press.

SZABOLCSI, ANNA. 2002. Hungarian disjunctions and positive polarity. In I. Kenesei and P. Siptár (eds.). *Approaches to Hungarian 8: Papers from the Budapest conference*, pp. 217-241. Budapest: Akadémiai.

SZABOLCSI, ANNA. 2004. Positive polarity – negative polarity. *Natural Language and Linguistic Theory* 22: 409-452.

SZABOLCSI, ANNA and BILL HADDICAN. 2004. Conjunction meets negation: A study in cross-linguistic variation. *Journal of Semantics* 21: 219-249.

VENDLER, ZENO. 1967. *Linguistics in philosophy*. Ithaca: Cornell University Press.