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**FREE CHOICENESS: FACTS, MODELS AND
PROBLEMS**

Workshop Proceedings

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Lucia Tovenà (eds.)

11th – 15th of August, Freie und Hansestadt Hamburg

Workshop

FREE CHOICENESS: FACTS, MODELS AND PROBLEMS

<http://elico.linguist.jussieu.fr/fc-esslli08.html>

organised by J.Jayez and L.M. Tovenà as part of ESSLLI 2008
11-15 August, 2008 in Hamburg, Germany

Event Description:

So called Free Choice Items (words like 'any' in English) are represented in the lexicon of most natural languages. Roughly speaking, they express equivalence between the members of a set from different points of view (practical, inferential, affective). In addition to raising difficult descriptive problems for linguists, they prove challenging for formal and cognitive theories that explore the relations between linguistic meaning, reasoning abilities and emotions.

The general goal of the workshop is to offer an up to date guided tour of this complex landscape and to bring out the major threads of the debate.

Topics:

- Free Choiceness and the treatment of alternatives
- Subtriggering
- Attitudinal values: widening, indifference, derogatory uses, etc. Are they peripheral or core values?
- (In)definiteness and quantification: the existential vs. universal debate
- Free Choice items in diachrony
- Free relatives
- The relation of Free Choiceness to polarity sensitivity

Invited Speakers:

Veneeta Dayal (Rutgers University USA)
Rob van Rooy (ILLC Amsterdam Holland)

Experts in the reviewing committee:

Cleo Condoravdi (Xerox USA)
Francis Corblin (Université Paris 4 France)
Veneeta Dayal (Rutgers University USA)
Chungmin Lee (Seoul National University Korea)
Rob van Rooy (ILLC Amsterdam Holland)

for updates of the workshop program, and an online version of the proceedings, cf.
<http://elico.linguist.jussieu.fr/fc-esslli08.html>

Workshop

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11-15 August, 2008 in Hamburg, Germany

Program

Mon 11th

9:15 - 10	<i>Introduction</i> Jacques Jayez and Lucia M. Tovena
10 - 10:45	<i>Disjunction and Free Choice in Korean</i> Jinyoung Choi

Tue 12th

9:15 - 10	Veneeta Dayal invited speaker
10 - 10:45	<i>The puzzle of kolwiek-pronouns in Polish</i> Joanna Blaszczak

Wed 13th

9:15 - 10	<i>Free-Choiceness and Grammaticalization</i> Makoto Kaneko
10 - 10:45	<i>Intension, free choiceness and the role of 'mo' in Japanese</i> Yoshie Yamamori

Thu 14th

9:15 - 10	Robert van Rooy invited speaker
10 - 10:45	<i>Antisingleton Effects</i> Luis Alonso-Ovalle and Paula Menéndez-Benito

Fri 15th

9:15 - 10	<i>On a non-canonical polarity sensitive wh-item in Czech</i> Radek Šimík
10 - 10:45	Discussion

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DISJUNCTION AND FREE CHOICE IN KOREAN

1. Goal In this paper, I present a unified and compositional analysis of Korean free choice (FC) items *amwu*-(N)-*na* and *wh*-(N)-*na*, where the disjunctive particle *-na* ‘or’ combines with the indefinite roots *amwu-* and *wh-*. I am particularly concerned with identifying the source for their FC-ness and accounting for their licensing environments and quantificational force. **2. Source of FC-ness** I propose that the FC-ness of *amwu/wh*-(N)-*na* comes solely from the particle *-na*, and not from the domain-widening (DW) of *amwu-* or any combination of one of the indefinite roots and the particle (cf. Jayez & Tovena ’05; contra Kim and Kaufmann ’06). **2.1. Similarity between *amwu/wh*-(N)-*na* and FC *any*** In order to make this point, I first demonstrate that *wh*-(N)-*na* as well as *amwu*-(N)-*na* is not merely a \forall , but a FC item (contra Y. Lee ’99). First, *amwu/wh*-(N)-*na* convey that there exists an essential link between the denotation of the NP headed by *-na* and the remainder of the sentence. In (1a), *amwu/wh*-(N)-*na* convey that there is an essential link between “being five-year-old” and “being allowed/able to solve the problem”. The only difference between the two FCIs lies in the size of the domain; *amwu*-(N) triggers DW and considers contextually marginal entities, whereas *wh*-(N) ranges over a regular or contextually salient domain (Kadmon and Landman ’93). By contrast, a case-marked \forall in (1b) does not necessarily convey the essential link. The behavior of *amwu/wh*-(N)-*na* in delivering an essential relation is similar to English FC *any*, which can only appear in non-accidental (2a), but not in accidental statements (2b). The oddness of *any* in (2b) leads us to think that there is an incompatibility between the essential nature of FC *any* and expressing an accidental generalization with *any*. Plain \forall , *every* does not exhibit such contrast in (2). Second, *amwu/wh*-(N)-*na* behave like FC *any* w.r.t. licensing environments. FCIs typically occur in generic contexts (3), and are usually not licensed in episodic sentences (4). Similarly, *amwu/wh*-(N)-*na* are happy in generic contexts (5), and deviant in episodic sentences (6). In addition, some rescuing strategies can be employed to improve *amwu/wh*-(N)-*na* in episodic sentences: (i) just as *any* can be rescued by subtriggering (7) (Dayal ’98), *wh*-(N)-*na* (but not *amwu*-(N)-*na*.) can improve with subtriggering (8), and (ii) *amwu/wh*-(N)-*na* can be rescued when they occur under the scope of a volitional agent (9). **2.2. The *-na* source and its formalization** Given that both of *amwu/wh*-(N)-*na* are FCIs, I argue that their FC-ness comes solely from the particle *-na* ‘or’, common to *amwu/wh*-(N)-*na*. Its contribution is to trigger an essential relation, as in (1a). Formally, this is captured by adding to the plain assertion (10a) a presupposition of variation with a counterfactual modal base F (10b). This is completely parallel to von Stechow’s (2000) analysis of *-ever* in *-ever* Free Relatives (FRs), thus arguing that the FC-ness of *-na*-FCIs and the indifference flavor of *-ever* FRs have the same source. The differences between *-ever* FRs and *-na*-FCIs are: (i) the presupposition induced by *-na* is always counterfactual (i.e., never epistemic) and (ii) *amwu/wh*-(N)-*na* are basically indefinites whereas *-ever* FRs are definites. **2.3. Application** An application of (10) gives to the simple episodic sentences in (9) the interpretation in (11). The presupposition in (11b) leads to an essential link, which is naturally construed as being on the part of the agent John (12). From agent indifference, freedom of choice is guaranteed so that all girls (at the party yesterday) were a kissing option for John. Likewise, the generic sentences (5) are formalized as (13), where the generic operator GEN is applied to the clause that contains *-na* FCIs. The presupposition (13b) yields the interpretation that the identity of grasses doesn’t matter to the general nature of horses (14), which leads to FC effects. **3. Licensing environments** We account for the licensing environments of *amwu/wh*-(N)-*na* such that they are licensed in a context where the presupposition of *-na* is fulfilled. In a non-agentive episodic sentence like (6), its presupposition “If a different guy had been considered, he would have been standing” is too strong to ever be true because we’d need an essential link between “being a guy” and “standing” (Dayal ’98; Chierchia ’05), and the FCIs are ungrammatical. In contrast to this, in an agentive episodic sentence (9), the agent’s indifferent attitude can make the presupposition felicitous (12). Also, in a law-like statement such as (5), the presupposition (13b) is satisfied by establishing an essential link through external indifference like (14). Thus, both (9) and (5) are predicted to be grammatical. As for the subtriggered *-na* FCIs in (8), I propose that subtriggering is a way to make the presupposition of *-na* satisfied by making the sentences semi-generic. That is, I assume that GEN is introduced when *-na*-FCIs are

subtrigged, then the FCIs move to the restrictor of GEN if they are allowed. According to Choi '07, the DW indefinite, *amwu-(N)-na* always takes narrow scope under an operator (e.g, assertoric) (15a), while *wh-(N)-na* can take either narrow (15a) or wide scope (15b) w.r.t. an Op thanks to its “partitive indefinite”-like property. Thus, *wh-(N)-na* can move and sit in the restriction of GEN (16b) while *amwu-(N)-na* cannot move outside but remains in-situ (16a). In (8), subtrigged *wh-(N)-na* with the LF (16b) can make the presupposition of variation felicitous via external indifference: there is an essential link between “being a guy who is watching the soccer game” and “being standing”. **4. Q-force** *Amwu-/wh-(N)-na* are indefinites, whose basic quantification is \exists . Whenever they are interpreted in the restriction of GEN (13, 16b), they have \forall -force via QVE (Kamp '81; Heim '82).

- (1) a. amwu-/etten-tasus-salccali-na ku mwuncey phul-swu.iss-e.
 AMWU-/WHAT-five-year-OR that problem solve-can-DEC
 ‘(Just) any five-year-old can solve the problem.’
 b. motun-tasus-salccali-ka ku mwuncey phul-swu.iss-e.
 ALL-five-year-NOM that problem solve-can-DEC
 ‘Every five-year-old can solve the problem.’
- (2) a. $\sqrt{\text{Anybody}}/\sqrt{\text{Everybody}}$ who is in Mary’s semantics seminar is writing a paper on NPIs.
 b. $\# \text{Anybody}/\sqrt{\text{Everybody}}$ who is in Mary’s physics course is writing a paper on NPIs.
- (3) Horses eat any grass. (5) Mal-un $\sqrt{\text{amwu-}}/\sqrt{\text{etten-phwul-ina}}$ mek-nun-ta.
 horse-TOP AMWU-/WHAT-grass-OR eat-GEN-DEC
 ‘Horses eat (just) any grass.’
- (4) *Anyone contributed to the fund. (6) *amwu-/*etten-namca-na se-iss-ta.
 AMWU-/WHAT-guy-OR stand-PROG-DEC
 ‘(Lit.) Any guy is standing.’
- (7) Anyone who heard the news contributed to the fund. (Dayal '98)
- (8) Pa-ese chwukkkuw-lul po-ko.iss-nun *amwu-/\sqrt{etten-namca-na} se-iss-ta.
 Bar-LOC soccer-ACC watch-PROG-REL AMWU-/WHAT-guy-OR stand-PROG-DEC
 ‘(Lit.) Any guy who is watching the soccer game is standing.’ (Choi and Romero '07)
- (9) John-un ecey phathi-ese $\sqrt{\text{amwu-}}/\sqrt{\text{etten-yeca-hako-na}}$ khissuha-ass-ta.
 J.-TOP yesterday party-LOC AMWU-/WHAT-girl-with-OR kiss-PAST-DEC
 ‘(Lit.) John kissed random girls at the party yesterday.’ (Choi and Romero '07)
- (10) *amwu-/wh-(N)-na* (w_0) (F) (P) (Q)
 a. **Asserts:** $\exists x [P(w_0)(x) \wedge Q(w_0)(x)]$ “Some P is Q in the actual world w_0 .”
 b. **Presupposes:** $\forall w' \in \min_{w_0} [F \cap \lambda w''. P(w'')] \neq P(w_0)$: $\exists x [P(w')(x) \wedge Q(w')(x)] = \exists x [P(w_0)(x) \wedge Q(w_0)(x)]$ “In all the counterfactual worlds w' such that the set of individuals that have property P in w' does not equal the set of individuals that have P in w_0 and w' differs minimally from w_0 otherwise: what is asserted for w_0 also holds for w' .”
- (11) **a.Asserts:** $\exists x [\text{girl}(x, w_0) \wedge \text{kiss}(j, x, w_0)]$ “In w_0 , there is some girl in w_0 that John kissed (at the party yesterday) in w_0 .” **b.Presupposes:** $\forall w' \in \min_{w_0} [F \cap \lambda w''. \text{girl}(x, w'')] \neq \text{girl}(x, w_0)$: $\exists x [\text{girl}(x, w') \wedge \text{kiss}(j, x, w')] = \exists x [\text{girl}(x, w_0) \wedge \text{kiss}(j, x, w_0)]$ “In all counterfactual worlds w' minimally different from w_0 , w.r.t. the identity of the set of girls, there is some girl in w' that John kissed in w' iff there is some girl in w_0 that John kissed in w_0 .”
- (12) **Agent Indifference / essential link:** John was indifferent as to the identity of the girl(s) he kissed. There is an essential link between “being a girl” and “being kissed by John”.
- (13) **a.Asserts:** $\text{GEN}_{s \leq w_0} [C(s) \wedge \exists y. \text{horse}(y, s) \wedge \exists x. \text{grass}(x, s)] [\text{eat}(y, x, s)]$ **b.Presupposes:** $\forall w' \in \min_{w_0} [F \cap \lambda w''. \{x: \text{grass}(x, w'')\} \neq \{x: \text{grass}(x, w_0)\}]$: $\text{GEN}_{s^+ \leq w'} [C(s^+) \wedge \exists y. \text{horse}(y, s^+) \wedge \exists x. \text{grass}(x, s^+)] [\text{eat}(y, x, s^+)] = \text{GEN}_{s \leq w_0} [C(s) \wedge \exists y. \text{horse}(y, s) \wedge \exists x. \text{grass}(x, s)] [\text{eat}(y, x, s)]$ “If a different type of grass had been considered, horses would have eaten it.”
- (14) **External indifference / essential link:** The identity of grasses doesn’t matter. There is an essential relation between “being grass” and “being an x such that horses eat x”.
- (15)a. $[_{IP} \text{Op} [_{TP} \dots \text{amwu-/wh-(N)-na} \dots]]$ (16) a. $[_{IP} \text{GEN} [_{IP} \text{amwu-(N)-na} [_{IP} \text{Op} [_{TP} \dots]]]] \bullet^*$
 b. $[_{IP} \text{wh-(N)-na} [_{IP} \text{Op} [_{TP} \dots \text{t.}]]]$ b. $[_{IP} \text{GEN} [_{IP} \text{wh-(N)-na} [_{IP} \text{Op} [_{TP} \dots \text{t.}]]]]$

The puzzle of *kolwiek*-pronouns in Polish

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1. The issue

In many languages of the world the same items can be used both in negative polarity environments and in the free choice function. English with its NPI (= Negative Polarity Item) *any* and FCI (= Free Choice Item) *any* is an example of such a language. However, English is by no means unique in this respect. As Laurence Horn acknowledges: “Although I supposed in my 1972 dissertation that English was unusual in this respect (having an item like *any* that fits both frames), it turns out that it’s more the rule than the exception (...).”¹ Also in Polish we find morphologically nonnegative pronouns, *kolwiek*-pronouns (derived from interrogative pronouns; see Table 1), which – just like *any* in English – may be used in both negative polarity and free choice contexts; cf. (1) and (2).

Table 1: *kolwiek*-series in Polish

	interrogative pronouns	<i>kolwiek</i> -series
person	kto ‘who’	kto-kolwiek ‘anyone’
thing	co ‘what’	co-kolwiek ‘anything’
time	kiedy ‘when’	kiedy-kolwiek ‘any time’
place	gdzie ‘where’	gdzie-kolwiek ‘anywhere’
manner	jak ‘how’	jak-kolwiek ‘anyhow’
possessive determiner	czyj ‘whose’	czyj-kolwiek ‘anybody’s’
quality	jaki , ‘what (kind of), which one’	jaki-kolwiek ‘any’
determiner	który ‘which’	który-kolwiek ‘any’

(1) Negative polarity contexts

- a. Niewiele studentów czyta *jakiegokolwiek* naukowe czasopisma.
 few students reads any scientific journals
 ‘Few students read any scientific journals.’
- b. Dziadek umarł, zanim zobaczył *którekolwiek* ze swoich wnuków.
 grandpa died before saw_{3.SG.M} any of self’s grandchildren
 ‘The grandpa died before he saw any of his grandchildren.’

(2) Free choice contexts

- a. *Ktokolwiek* może rozwiązać ten problem.
 anyone can solve this problem
 ‘Anyone can solve this problem.’
- b. *Jakikolwiek* fachowiec to potwierdzi.
 any specialist this confirms
 ‘Any specialist will confirm this.’

However, unlike *any* in English, *kolwiek*-pronouns in Polish show a peculiar distributional pattern (which will be discussed in more detail in section 2). Polish is of course by no means unique in this respect. Other cases of polarity items with strange and at first sight unexpected distributional patterns have been reported in the literature as well; cf., among others, van der Wouden 1997, Pereltsvaig 2004, Lee 1996, Giannakidou 1998, 2001). For reasons of space, I will concentrate here only on the Polish data.

The paper is organized as follows. In section 2 two puzzling facts in the distribution of *kolwiek*-pronouns will be discussed. The first puzzle has to do with the non-occurrence of *kolwiek*-pronouns in the context of clausemate negation, and the second puzzle concerns the non-occurrence of *kolwiek*-pronouns in quasi-universal statements. In section 3, it will be argued that *kolwiek*-pronouns belong to what Rullmann (1996) calls *wh*-NPIs, which – unlike *even*-NPIs – are neither focus-sensitive nor scalar and, in addition, show free-choice uses. Etymologically, *wh*-NPIs are presumably derived from concessive conditional clauses (cf. Haspelmath 1993). It will be shown that this

¹ Cf. LINGUIST List: Vol-9-1136. Tue Aug 11, 1998. ISSN: 1068-4875. Subject: 9.1136, Sum: NPIs and FCIs.

assumption is supported by the etymological facts from Polish. In section 4, to solve the puzzles mentioned above, it will be proposed that *kolwiek*-pronouns are neither existential nor universal quantifiers (cf. Tovena 1998). They are non-specific indefinites whose semantics involve concession by arbitrary or disjunctive choice (cf. Lee 1996). Finally, section 5 will summarize the paper.

2. Puzzles in the distribution of *kolwiek*-pronouns

On the basis of examples in (1) and (2) above, *kolwiek*-pronouns could be argued to fall between the NPI and FCI categories. There are, however, two puzzles in the distribution of *kolwiek* pronouns that are unexpected, when comparing them for example with *any* in English.

2.1 Puzzle 1

Though *kolwiek*-pronouns, just like *any* in English, may occur in negative polarity contexts, as evidenced by (1), unlike *any*, they are excluded from the context of direct or clausemate negation, as illustrated in (3a). In the latter type of context, morphologically negative pronouns, the *ni*-pronouns, have to be used instead, as shown in (3b).² As a matter of fact, *ni*-pronouns and *kolwiek*-pronouns are in complementary distribution. *Ni*-pronouns may occur in matrix negative clauses (3b), but are banned from other typical negative polarity contexts (4). *Kolwiek*-pronouns, on the other hand, may occur in typical negative polarity contexts (1), but are banned from matrix negative clauses (3a). These findings are summarized in Table 2.

- (3) a. * Ewa **nie** spotkała *kogokolwiek*.
 Eve NEG met anyone
 b. ✓ Ewa **nie** spotkała *nikogo*.
 Eve NEG met no one
 ‘Eve didn’t meet anyone.’
- (4) a. * Niewiele studentów czyta *żadne* naukowe czasopisma.
 few students reads no scientific journals
 b. * Dziadek umarł, zanim zobaczył *żadne* ze swoich wnuków.
 grandpa died before saw_{3.SG.M} none of self’s grandchildren

Table 2: Distribution of *ni*-pronouns and *kolwiek*-pronouns

environment	<i>ni</i> -pronouns	<i>kolwiek</i> -pronouns
clausemate negation	√	*
other negative polarity contexts	*	√

Given these facts, it is surprising to find examples like (5) below. Such examples are puzzling since it is not clear why *kolwiek*-pronouns may occur in the context of direct negation from which they are otherwise banned. In cases like (5) we have to do with what I called in Błaszczak (2001) “attributive use” of *kolwiek*-pronouns. In this use *kolwiek*-pronouns have a special meaning comparable to that of a strong/emphatic NPI *any* (as argued for, e.g., by Krifka 1994, Kadmon and Landman 1993, Lee and Horn 1994, Rullmann 1996, Tovena 1998): a *kolwiek*-pronoun creates a stronger (more emphatic) statement in comparison with a corresponding *ni*-pronoun; the interpretation of (5) would thus be something like ‘He didn’t show any interest at all, not even the slightest bit of interest one would expect.’

- (5) a. On **nie** wykazał ✓ *jakiegokolwiek* zainteresowania.
 he NEG showed any interest
 ‘He did not show any interest at all.’
 b. On **nie** wykazał ✓ *żadnego* zainteresowania.
 he NEG showed no interest
 ‘He showed no interest.’

² The pronoun *żaden* (cf. (4)) is an exception among the negative pronouns in Polish in that it does not contain the *ni*-prefix. However, etymologically – at least according to Otrębski (1966) – this pronoun is derived from the numeral *jedyn* ‘one’ and the negative particle *ni*, which co-occurred with the strengthening particle *-że*.

2.2 Puzzle 2

Even if – as Rullmann (1996:5) observes – “giving a formal characterization of the notion of free-choice context is notoriously difficult,” there seems to exist a consensus in the literature that modal and generic contexts are licensors of FC *any* (cf. e.g., Dayal 1998 and the references cited there). In most cases only a few contexts are provided to illustrate a FC use of a given item. Usually these are modal contexts (cf. e.g., Progovac 1990, 1994; Kawashima 1994, Rullmann 1996). Sometimes, more examples are offered, e.g., generic, modal and imperative sentences, etc. (cf. Y.-S. Lee 1993, C. Lee 1996, Lahiri 1998, Dayal 1998). In some cases the list of contexts in which an item characterized as FCI can occur is quite impressive (cf., e.g., Giannakidou 1998). By and large, however, as observed by Haspelmath (1993:52), “there seems to be very little cross-linguistic variation in the conditions under which free-choice indefinites are possible (...)” Examples of contexts in which FCIs occur crosslinguistically (cf. Haspelmath 1993:52ff) are given in Table 3. As shown in the table and demonstrated in the examples underneath, Polish *kolwiek*-pronouns – just as the English FCI *any* – may occur in all these contexts. Thus, they can be regarded as FCIs.

Table 3: Free Choice contexts and the distribution of *kolwiek*-pronouns

environments	<i>kolwiek</i> -pronouns	ANY
modal contexts (especially possibility and permission)	ok cf. (6a), (6b)	ok
imperatives	ok cf. (7)	ok
generic/future contexts	ok cf. (8)	ok
hypothetical/counterfactual sentences	ok cf. (9)	ok
sufficient condition, etc.	ok cf. (10)	ok

Modal contexts

- (6) a. *Ktokolwiek* może rozwiązać ten problem.
 anyone can solve_{INF} this problem
 ‘Anyone can solve this problem.’
 b. Możesz wyjść za mąż za *kogokolwiek*.
 may_{2.SG.PRES} marry_{INF} (take for husband) for anyone
 ‘You can marry anyone.’

Imperatives

- (7) Weź *jakiegokolwiek* jabłko z kosza.
 take_{2.SG.IMP} any apple from basket
 ‘Take any apple from the basket.’

Generic/future contexts

- (8) *Jakikolwiek* fachowiec to potwierdzi.
 any specialist this confirm_{3.SG.PRES.PERF}
 ‘Any specialist will confirm this.’

Hypothetical/counterfactual contexts

- (9) Ona by wyszła za mąż za *kogokolwiek*.
 she COND marry_{PAST.PART} (take_{PAST.PART} for husband) for anyone
 ‘She would marry anyone.’

Sufficient condition

- (10) *Jakakolwiek* suma wystarczy / będzie odpowiednia.
 any sum suffice_{3.SG.PRES.PERF} / will-be adequate
 ‘Any sum will be sufficient / will be adequate.’

Now, given that FC contexts are sometimes characterized as generic or modal and given that – as just shown above – *kolwiek*-pronouns may occur in FC contexts, one would expect *kolwiek*-pronouns to be acceptable in all kinds of generic statements. This expectation is not fulfilled. FC *kolwiek*-pronouns in Polish are not as good – they are, in fact, mostly rejected by native speakers of Polish in generic

statements in which the predicate expresses a necessary, even a definitional property which holds true for every element denoted by the subject. This was observed by Burton-Roberts (1976) for English, but the same is also true for Polish, cf. (11) below ((11a) is cited from Carlson and Pelletier 1995:101). Notice also that even examples cited in literature as typical examples involving FCI *any* in English are not as good in Polish; cf. (12)). Such examples become acceptable if a modal clause is used, as shown in (13).

- (11) a. * Any beaver is an amphibious rodent.
 b. * *Jakikolwiek* bóbr jest ziemnowodnym gryzoniem.
 any beaver is amphibious rodent
- (12) a. Any cat hunts mice.
 b. ?? *Jakikolwiek* kot łowi myszy. vs. ✓ *Każdy* kot łowi myszy.
 any cat hunts mice every cat hunts mice
 any cat hunts mice
- (13) *Jakiegokolwiek* by wziąć kota, to poluje on na myszy.
 whichever COND take_{INF} cat then hunt_{3.SG.PRES} he on mice
 ‘Whichever (any) cat you take hunts mice.’

3. Towards an analysis

The question that arises at this point is what kind of elements *kolwiek*-pronouns are; in particular, what makes them possible to occur in both functions, i.e., in that of a NPI and that of a FCI, while still showing some distributional restrictions which make them different from comparable element *any* in English. In approaching the answer to these questions, I will first show in the next section (3.2) that *kolwiek*-pronouns – under the assumption that they are NPIs – must belong to what Rullmann (1996) calls *wh*-NPIs, which – unlike *even*-NPIs – are neither focus-sensitive nor scalar. This first approximate characterization of *kolwiek*-pronouns will turn out as a useful intermediate step in the analysis since it will shed light on the behavior of these elements. The confirmation of this assumption will further come from the discussion of the etymological facts in section 3.3. Once the origins of the meaning and function of *kolwiek*-pronouns are established, we will gain more insight into their contemporary distribution.

3.1 Rullmann’s (1996) distinction between *even*-NPIs and *wh*-NPIs

Rullmann (1996) argues on the basis of data from Dutch that there are two different types of NPIs, *even*-NPIs (*ook maar*-series in Dutch) and *wh*-NPIs (*dan ook*-series in Dutch), for which two different analyses are required: an analysis along the lines proposed by Lee and Horn (1994) in the former case, and a Kadmon and Landman (1993) style of analysis in the latter case.

Even-NPIs in Dutch are used only in negative polarity contexts, whereas *wh*-NPIs, besides occurring in the standard negative polarity environments, may also be used in the free choice function; cf. (14). Etymologically, *wh*-NPIs are presumably derived from concessive conditional clauses.

- (14) a. Niemand heeft met *ook maar* een student overleg gepleegd. *even*-NPI
 nobody has with even_{NPI} one student consulted
 ‘No one consulted any students.’
 b. Niemand heeft met *welke* student *dan ook* overleg gepleegd. *wh*-NPI
 nobody has with which student PRT PRT consulted
 ‘No one consulted any students.’

Although the two types of NPIs can be substituted for each other in many cases (in negative polarity contexts), they differ in that while “*even*-NPIs are inherently scalar and sensitive to focus, *wh*-NPIs are neither” (Rullmann 1996:340). Applying the tests used by Rullmann to *kolwiek*-pronouns, it can be shown that they belong to the class of *wh*-NPIs.

3.2 *Kolwiek*-pronouns as *wh*-NPIs

The first test examines the effect of the placement of focus. If an NPI contains a focus particle, the expectation is that different placement of focus will affect the interpretation of such an NPI. If, however, an NPI does not contain a focus particle, one would not expect a change in the placement of focus to influence the interpretation of the NPI in question.

The examples in (15) demonstrate that *kolwiek*-NPIs are not focus sensitive, just like *wh*-NPIs. The function of focus seems to be merely contrastive. Thus, in (15b), the focus does not lead to different scalar presuppositions of the kind that, for example, seeing a woman is less likely than seeing a man.

- (15) a. Jeśli zobaczysz JAKĄKOLWIEK kobietę, obudź mnie.
 if see_{2.SG} any woman wake me
 ‘If you see ANY woman, wake me up.’
 b. Jeśli zobaczysz jakąkolwiek KOBIECĘ, obudź mnie.
 if see_{2.SG} any WOMAN wake me
 ‘If you see any WOMAN, wake me up.’

The second test has to do with the interpretation of conditionals containing NPIs with a numeral greater than ‘one’. If an NPI contains a scalar particle, we expect there to be a scalar presupposition that the speaker is less likely to be satisfied if, for example, two students undertake the task than if more than two do. If, however, an NPI does not contain a scalar particle, no such presupposition is expected. As illustrated in (16), a *kolwiek*-pronoun, just like a *wh*-NPI, merely indicates that it does not matter which two students undertake the particular task. In other words, it does not implicate what happens if more than two students undertake the task.

- (16) Jeśli jakichkolwiek dwóch studentów podejmnie się
 if any two students undertake REFL
 tego zadania, będę zadowolona
 this task will-be_{1.SG} satisfied
 ‘If any two students undertake this task, I will be satisfied.’

The third (and last) test examines the compatibility with measure nouns and minimizers. The expectation is that only NPIs that are inherently scalar (i.e., those that incorporate the semantics of ‘even’) are compatible with measure nouns, which are ranked along a scale, and with minimizers, which refer to the minimal point on a scale. *Wh*-NPIs are expected not to be compatible with such expressions.

Example (17) shows that *kolwiek*-pronouns pattern with *wh*-NPIs: unlike the focus particle in (17b), the *kolwiek*-pronoun in (17a) is not compatible with a minimizer.

- (17) a. * Nie sądzę, żeby to potrwało jakąkolwiek minutę.
 NEG think_{1.SG.PRES} that+SUBJ this lasted any minute
 (* I don’t think this will last any minute.)
 b. Nie sądzę, żeby to potrwało choćby (jedną) minutę.
 NEG think_{1.SG.PRES} that+SUBJ this lasted even (one) minute
 ‘I do not think this will last even a/one minute.’

3.3 Etymology of *kolwiek*-pronouns

On the basis of the tests above it can be concluded that *kolwiek*-pronouns must be regarded as belonging to the class of what Rullmann refers to as *wh*-NPIs. This assumption is further supported by the etymological facts. Interestingly, the particle *le/li*, contained in the *kolwiek*-part of the pronouns under discussion, was used in the concessive function (cf. Cieślíkowa 1965:45). In addition, the particle *li* could be used in the function of an alternative particle *li ... li* ‘either ... or’ (cf. Sławski, vol. 4).³

³ For more discussion on the etymology of *kolwiek*-pronouns, see Błaszczak (2001).

If the etymological facts are correct, two important meaning components of *kolwiek*-pronouns would be identified, namely a concessive component and/or a disjunctive component. These findings will play an important role in the analysis presented in section 4.

4. The proposal

4.1 Concession and disjunction: ‘arbitrary choice’

Under the assumption that particle *le-/li* is a concession marker, its function in *kolwiek*-pronouns would be thus that of showing the notion of concession, creating the meaning that a given proposition holds even for an arbitrarily chosen element (from the range denoted by the common noun). This in turn might have the effect of strengthening the proposition expressed by the main clause.

I would like to suggest that the notion of ‘arbitrary choice’ based on indefiniteness is the underlying essential notion in the licensing of *kolwiek*-pronouns both in negative polarity and free choice contexts. Once this fact is recognized, it seems possible to assume that there is only one *kolwiek*-item instead of assuming two different (though homophonous) *kolwiek*-items: *kolwiek*-NPI and *kolwiek*-FCI. Assuming that ‘arbitrary choice’ is the essential notion, it becomes immediately clear why *kolwiek*-pronouns are excluded from straightforward nonintensional episodic sentences like that in (18). In such sentences the speaker is committed to the existence and identifiability of the entity. Since the meaning conveyed by (18) must be that there is some specific *x* such that Ewa married *x* yesterday, there is no way of satisfying the concession: an element *x* cannot be arbitrarily chosen since it has been as such already identified.

(18)	* Wczoraj	Ewa	poślubiła	<i>kogokolwiek</i> .
	yesterday	Ewa	marry _{3.SG.PAST.FEM}	anyone

It should be pointed out that it is precisely the impossibility of the satisfaction of arbitrariness (irrelevance) component of their meaning that makes the use of *kolwiek*-pronouns unacceptable in such contexts. The exclusion of *kolwiek*-pronouns from contexts like that in (18) cannot be solely due to the fact that in this context the existence of an entity in question is entailed (cf. the notion of ‘a veridical context’; see Giannakidou 1998 for a detailed discussion). That the licensing of *kolwiek*-pronouns does not have primarily to do with the ‘existence entailment’ shows the fact that they are acceptable in imperatives of the kind illustrated in (7). In (7) there will be some apple which is picked from the basket if the command is executed (cf. Tovina 1998, Tovina and Jayez 1997). The hearer can however arbitrarily choose which apple he/she will take.

The question which arises immediately at this point is the following: if it is really the arbitrary choice that matters, why is the interpretation of *kolwiek*-pronouns different in that in negative polarity contexts they are interpreted existentially whereas in free-choice contexts they rather give rise to an universal or universal-like interpretation.⁴ The answer that suggests itself is to assume that *kolwiek*-pronouns are ‘sensitive’ indefinites understood in the sense of Heim (1982). Being sensitive elements, their distribution is not free, but limited to (sensitive to) contexts that allow for ‘arbitrary choice’ of the referent denoted by the NP in question. Being Heimian indefinites on the other hand, their quantificational force will depend on their context of use.

There is yet another way of understanding of the seeming quantificational variability of *kolwiek*-pronouns. I noted at the outset of this section that the crucial notion in the account of *kolwiek*-pronouns is the notion of concession by arbitrary choice. In other words, the choice of *x* referred to in a given sentence is left to the hearer. The notion of choice presupposes in turn that there is a (contextually given) set of alternatives the hearer may choose from. It seems plausible that a choice

⁴ It should be pointed out that even though free-choice any might have some kind of universal meaning, there is still a difference between them. So for instance, Haspelmath (1993:91), following the observation by Vendler (1967), points out that (ia) and (ib) “do not have the same meaning, and not even the same truth conditions. [] Assuming a meaning element of universal quantification in free-choice indefinites is particularly suspect in cases like [(ia)], which is evidently very different from [(ib)].”

- (i) a. Any doctor will tell you that Stopsneeze has dangerous effects.
- b. Every doctor will tell you that Stopsneeze has dangerous effects.
- (ii) a. Take any apple.
- b. Take every apple.

among alternatives is based on some kind of disjunctive choice⁵ (cf. Lee 1996:510). Given this, the following observation seems of an immediate relevance (cited from Kadmon and Landman 1993:355):

(...)the existential/universal flip-flop we observe with ‘any’ has a parallel in a disjunction/conjunction flip-flop with ‘or’. In the same contexts where FC ‘any’ is allowed, it is possible to interpret ‘or’ as free choice disjunction, i.e., disjunction with a conjunction meaning (...) and with the same ‘free choice’ flavor (‘whichever you choose’) that we find with FC ‘any’.

Notice that whereas episodic or realis contexts necessitate the exclusive interpretation of disjunction, cf. (19), the non-episodic or modal contexts allow an inclusive interpretation, cf. (20). Thus for instance (19b) can only mean that the book lies either on the table or on the bed, but not both on the table and on the bed. However, (20a) may mean that I would dance either with Mary or Sue, but it can also mean that I would dance with Mary and I would dance with Sue. Similarly, (20b) can mean that both Mary and Sue could tell you that. In other words, no matter which girl you choose, Mary or Sue, she could tell you that.

Observe now that a similar situation occurs in the case of FCIs, cf. (21). It seems that – as pointed out by Vendler (1967:85) – the FCI is here just “a blank warranty for conditional prediction: you have to fill in the names”. The meaning is here something like: if you choose *x*, *x* will tell you that. So for example, if you choose John, he will tell you that, if choose Paul, he will tell you that, and so on. This amounts to the meaning that no matter which person you choose she or he will tell you that.

- (19) a. He bought a book or a pencil.
b. The book is lying on the table or on the bed.

- (20) a. I would dance with Mary or Sue.
b. Mary or Sue could tell you that.

- (21) Anyone could tell you that.

4.2 Explaining the puzzles in the distribution of *kolwiek*-pronouns

Given what was said above about disjunction as possibly involved in the arbitrary choice,⁶ we may set about solving the puzzles in the distribution of *kolwiek*-pronouns pointed out in section 2.

Let us start with the second puzzle, namely the question why *kolwiek*-pronouns are not so easily acceptable in generic (law-like) statements like those given in (11) and (12) and why the universal determiner has to be used instead in such cases. I noted that the reason why *kolwiek*-pronouns sound odd seems to be that the predicate expresses a necessary, even a definitional property which holds true for every element denoted by the subject nominal phrase. Notice that in this case the use of *kolwiek*-pronouns presupposing the possibility of free/arbitrary choice or the possibility of selecting elements among contextually given alternatives does not make much sense because the predicate holds without exception, i.e., it is true for every element. Therefore, the function of the concessive marker contained in *kolwiek*-pronouns to strengthen the proposition expressed by the (main) clause by creating the meaning that the proposition holds even for an arbitrarily chosen element cannot be fulfilled. Notice however that the acceptability of *kolwiek*-pronouns is restored as soon as a modal/conditional clause is used (recall (13)). This is so because the arbitrary or disjunctive choice can be satisfied here.⁷

⁵ Recall that from etymological point of view, the particle *li* could also be used in an alternative/disjunctive function.

⁶ This assumption is by no means completely strange. In fact, as Haspelmath (1993:162-3) shows, there are many languages whose indefiniteness markers are formally identical to disjunctive conjunctions, and what more, “most of the ‘or’-indefinites (...) are primarily free-choice indefinites.”

⁷ This shows once again that Vendler’s explanation of the use of FC *any* is correct. The prediction underlying *any* statements is conditional in nature (see above). If the hearer chooses *x*, the statement will hold for the chosen *x*. Vendler (1967:82) notices, however, that a free choice item has another important property – that, in fact, is immediately relevant for the examples discussed in the text – namely the property “incompleteness”:

“This indifference has a very curious limitation: if I formulate my offer in terms of ‘any’, there will be an upper limit to my generosity. In case the basket contains, for example, only five apples, I can go as far as to ask you to take any four of them, but I cannot, logically, go all the way and ask you to take any five of them. For to do so would render your

To understand why the universal determiner is used in the cases at hand, it might be helpful to realize that there is a close relationship between universal quantification and conjunction on the one hand, and between existential quantification and disjunction on the other hand. Thus, “the conjunction (*both ...*) *and* corresponds logically, pragmatically, distributionally, and intonationally to the universal ALL, the disjunction (*either ...*) *or* to the existential or particular SOME (...)” (Horn (1989:254). Hence, it can be assumed that for a finite number of entities, a universal statement is equivalent to a conjunction, and an existential statement is equivalent to a disjunction; cf. (21) (cf. also Haspelmath 1993:162 and the references cited there).

- (21) a. both and and \forall
 either or or \exists
 b. $\forall(x) f(x) \equiv f(x_1) \wedge f(x_2) \dots \wedge f(x_n)$
 $\exists(x) f(x) \equiv f(x_1) \vee f(x_2) \dots \vee f(x_n)$

Since the problematic examples, being generic or law-like statements in which the predicate express a kind of definitional property holding true for every element denoted by the subject, correspond logically to a conjunctive AND, and not to a disjunctive OR, universal quantification corresponding to conjunction is preferred in such cases.

Last but not least, the suggested analysis seems to offer an answer to the second puzzle pointed out in section 2, namely to the question why *kolwiek*-pronouns are banned from negative sentences and why negative pronouns have to be used instead. The solution to this puzzle lies in the logical properties of binary connectives under negation, known as DeMorgan’s laws; cf. (22).

- (22) De Morgan’s laws
 a. $\neg(X \cup Y) \leftrightarrow \neg(X) \cap \neg(Y)$ (the first law)
 b. $\neg(X \cap Y) \leftrightarrow \neg(X) \cup \neg(Y)$ (the second law)

In negative contexts the entailment relation goes from disjunction to conjunction. The reverse entailment also holds; cf. (23). Notice that in Polish the disjunctive connective *lub* ‘or’ does not seem to be acceptable in negative sentences, as shown in (24a,b). (24c) shows that the connective *ani*, which means ‘neither/nor’ has to be used instead.

- (23) a. No man escaped **or** got killed. \Rightarrow
 No man escaped **and** no man got killed.
 b. No man escaped **and** no man got killed. \Rightarrow
 No man escaped **or** got killed.
- (24) a. ??Nikt nie biega **lub** spaceruje.
 nobody NEG runs or walks
 (‘No one runs or walks.’)
 b. ??Nikt nie biega **lub** nie spaceruje.
 nobody NEG runs or NEG walks
 c. Nikt nie biega **ani** (nie) spaceruje. \Rightarrow
 nobody NEG runs nor (NEG) walks
 Nikt nie biega **ani** nikt nie spaceruje.
 nobody NEG runs nor nobody NEG walks
 ‘No one runs and no one walks.’

This shows that the transparent entailment relation from disjunction to conjunction in negative sentences has to be marked as such in Polish. The claim is thus that as the connective *ani* is used to show that both conjuncts are in the scope of negation, similarly *ni*-pronouns have to be used in

freedom of choice vacuous and, consequently, my use of ‘any’ senseless. Hence we may conclude that the immediate scope of ‘any cannot exhaust the total population; in other words, ‘any’ never amounts to ‘every’.”

negative sentences to show that the indefinite is in the scope of negation. Because of the transparent entailment relation from disjunction to conjunction in strong negative contexts, the satisfaction of arbitrary choice based on disjunction is in principle not available.^{8, 9} No matter what x the hearer might choose the intended meaning is that the proposition does not hold for that x . So, for example, in a sentence ‘Mary did not buy x ’ with the intended meaning that there is no such x that Mary bought it the use of a *kolwiek*-pronoun would not be meaningful, since the ‘free choice’ given to the hearer would be rendered vacuous at the same time. To see this, let us simulate a free choice with respect to x in the given scenario. So, the sentence would be now: ‘Mary did not buy (a or b or c , etc.)’ (or: ‘Mary did not buy a or Mary did not buy b or Mary did not buy c , etc.’). The negation will turn the disjunction into conjunction, yielding something like: ‘Mary did not buy (a and b and c , etc.)’ (or: ‘Mary did not buy a and Mary did not buy b and Mary did not buy c , etc.’).

This assumption leads to the prediction that *kolwiek*-pronouns will be used meaningfully in negative sentences only in cases in which it is precisely the fact that the free/arbitrary choice is rendered vacuous that has to be emphasized. This in turn will necessarily lend an emphatic weight to a given statement. This prediction is, in fact, borne out. We know from section 2.1 that *kolwiek*-pronouns become acceptable in negative sentences when they are used emphatically (‘attributively’). In such cases the hearer is actually invited to freely select among (contextually given) possible alternatives (the concessive function) if only to find out that the proposition does not hold even for such a (presumably least expected, most humble) alternative. It is plausible to assume that the attributive use of *kolwiek*-pronouns somehow makes the construction of alternatives possible or more transparent so that arbitrary choice can be more easily satisfied here. What is to be chosen among in such cases are thus different properties of an already determined element (i.e., belonging to the set denoted by the common noun).

5. Conclusions

Kolwiek-pronouns may be used both in negative polarity and free choice contexts. In this respect, *kolwiek*-pronouns are neither existential nor universal quantifiers (cf. among others Tovena 1998, Giannakidou 2001). They are non-specific indefinites whose semantics involve concession by arbitrary or disjunctive choice. This semantic property is satisfied in weak negative polarity contexts and free choice (in particular modal) contexts. It is not, on the other hand, satisfied in generic, law-like statements corresponding logically to the conjunction AND for which universal determiners have to be used. Nor is it satisfied in strong negative contexts (clausemate negation) unless the emphatic meaning is intended. The important advantage of the proposed analysis is that the exclusion of *kolwiek*-pronouns from the context of clausemate negation is not absolute, but rather it is semantically

⁸ Unlike strong negative contexts (i.e., antimorphic contexts), weaker negative contexts (i.e., anti-additive and downward monotonic) are characterized as satisfying less than four DeMorgan’s rules (to be precise, three and two, respectively). It is presumably for this reason that *kolwiek*-pronouns are acceptable in weaker negative contexts. The entailment relation from disjunction to conjunction is less transparent. This in turn might enable the arbitrary choice based on disjunction. See also Lee (1996:520f.) for a suggestion along these lines. (He actually claims that free-choice expressions occurring with modals and weak NPI-licensors “show less transparency in the from disjunction to conjunction entailment than overt negation.”)

⁹ A supporting piece of evidence for the proposed analysis comes from Korean. Korean has the disjunction marker *-ina* ‘or’. This marker can be applied to *amu* and *wh*-indefinites which function then as free choice items, cf. (i). Interestingly, as pointed out by Lee (1996:519), such expressions (i.e., *amu (Common N) (-ina)*, though functioning as free choice items and as weak NPIs, are not used “for strict negative polarity in the scope of negation.” Actually, as Lee (1996:519) put it, “even if used with negation, its reading is in free choice or weak negative polarity.” In the latter context NPIs formed by means of another marker are normally used, cf. (ii). Thus the Korean situation would in some sense directly correspond to the Polish one.

(i) Mary-nun amu umak **-i-na** culkye tut -nun -ta. [from Lee (1996:519)]

Mary Top any music Disj enjoy listen Pres Dec
‘Mary enjoys listening to any music (randomly).’

(ii) Amu chinkwu-**to** an o -ass -ta. [from Lee (1996:506)]

any friend even not come Past Dec
‘No [not any] friend came.’

motivated. In other words, it is the meaning of *kolwiek*-pronouns that is incompatible with strong negative contexts under normal circumstances.

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Free-Choiceness and Grammaticalization

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1. Introduction

This study aims to reconsider various effects of Free-Choice (FC) items, especially the role of widening and the derivations of ignorance (non-identification) and derogatory readings. The discussion will be based on two FC items in Japanese, one of which is grammaticalized from the other.

In Japanese, quantifier phrases are built by associating so-called “indeterminate pronouns” (corresponding to WH words but lacking their own quantificational force) with a particle introducing some logical operator (Kratzer & Shimoyama 2002: 1-2). Previous studies (Kuroda 1965, Nishigauchi 1990, etc.) mention, as Japanese FC items, indeterminate pronouns + particle *demo* (‘even’), as *nan-demo* (‘what+even’= ‘anything’) in (1a), or *dare-demo* (‘who+even’= ‘anyone’) in (1b):

- (1)a. Taro-wa nomimono-o **nan-demo** kattta
Taro-Top drink- Acc what-even bought
‘Taro bought whatever drink (he found around him).’
- b. Taro-wa **dare-demo** syootaisita
Taro-Top who-even invited
‘Taro invited whoever.’

On the other hands, this study will be interested in indeterminate pronouns + disjunctive operator *ka* (‘or’), like *dare-ka* (‘who+or’= ‘someone’) in (2a) and *nani-ka* (‘what+or’= ‘something’) in (2b), which are analyzed as indefinite pronouns by previous studies.

As regards interpretations of specific indefinite pronouns, Haspelmath (1997) distinguishes two types: ‘known to the speaker’ (abbreviated by [+IDEN]) and ‘unknown to the speaker’ (abbreviated by [-IDEN]). Kamio (1973) points out that indefinite pronouns *nani-ka* or *dare-ka* may be used as appositives related to another case-marked noun, as in (2a,b), and that only [-IDEN] reading is accepted in these cases. Similar restriction is observed with indefinite determiners *irgend* in German (ex.(3a)) and *quelconque* in French (ex.(3b)) which are analyzed as FC items by Kratzer & Shimoyama (2002) and Jayez & Tovená (2006):

- (2)a. Taro-wa nomimono-o **nani-ka** kattta [***+IDEN / √-IDEN**]
Taro-Top drink- Acc what-or bought
‘Taro bought some drink or other (some drink which I cannot identify).’
- b. dooryoo-ga **dare-ka** Taro-ni denwasita. [***+IDEN / √-IDEN**]
colleague-Nom who-or Taro-Dat called ‘Some colleague or other called Taro.’
- (3)a. **Irgend**jemand hat angerufen. (Kratzer & Shimoyama 2002) [***+IDEN / √-IDEN / √derogatory**]
Irgend-one has called. ‘Someone or other called.’
- b. Marie a rencontré un diplomate **quelconque**. (Jayez & Tovená 2006: 218) [***+IDEN / √-IDEN**]
Marie has met a diplomat or other ‘Marie met some diplomat or other.’

Indefinite pronouns may also be used as appositive to disjoined members so as to express hedge reading, as in (4) (“I’m not sure if Taro chose tea or coffee”):

- (4) Taro-wa [[coffee ka kootya ka] **nani-ka**]-o nonda [hedge]
Taro-Top coffee or tea- or **what-or**-Acc drank ‘Taro drank coffee, tea or other.’
- (5) tegami-ga Taro-kara **nanka** kita. [derogatory]
letter Nom Taro-from NANKA came ‘A letter came from Taro of all people’

According to Martin (1987), such an appositive use of the indefinite pronoun *nani-ka* may be phonologically contracted and semantically bleached (ex. compatible with human NPs) into a focus particle *nanka*, illustrated by (5), where *nanka* is attached to a PP *Taro-kara* ('from Taro') and indicates that the fact expressed by the sentence ("A letter arrived from Taro") is surprising or inappropriate for the speaker. Similar derogatory reading is observed with FC determiner *irgend*: Aloni (2006) points out that *irgendjemand* in (3a) may denote a particular person whose call wasn't expected.

In what follows, I will first introduce basic data relevant to understand distributions and interpretations of the two FC item (appositive indefinites pronouns inducing [-DEN] and the focus particle *nanka*) (§ 2). I will next review some previous analyses about FC and examine their relevance with respect to the Japanese two FC items (§ 3). I will then advance my hypotheses concerning the derivations of the readings induced by these two items, in referring to Gracian conversational implicatures and in trying to situate these readings in the process grammaticalization (§ 4). The § 5 will summarize the results of this study.

2. Basic data

2.1. Indefinite pronouns

I first present some data in favor of the analysis of appositive indefinite pronouns in Japanese as FC items. These pronouns manifest at least three behaviors common to the French FC determiner *quelconque* discussed by Jayez & Tovina (2006): (i) they cannot be followed by a discourse clarifying their identity, as in (6a); (ii) they are excluded in contexts where the speaker can naturally know their identity, as in (6b); (iii) their referent cannot be uniquely identified, as in (6c):

- (6)a. Taro-wa nomimono-o **nani-ka** kattta #sore-wa koora data.
Taro-Top drink- Acc what-or bought that-Top coke was
'Taro bought some drink or other. # That was a coke.'
- b. ??watasi-wa nomimono-o **nani-ka** kattta
me- Top drink- Acc what-or bought
'I bought some drink or other.'
- c. *tatta hitori- no dooryoo-ga **dare-ka** Taro-ni denwasita.
only one person-Gen colleague-Nom who-or Taro-Dat called
'Some unique colleague or other called Taro.'

Furthermore, just as the German FC determiner *irgend* in (7a), appositive *nani-ka* may indicate, with necessity modality, that any choice will be ok. The possibility of this reading is confirmed by the compatibility with the pronoun *nan-demo* specialized for *any-choice-ok* reading, as in (7b):

- (7)a. Mary musste **irgendeinen** Mann heiraten. (Kratzer & Shimoyama 2002: 10) [*any-choice-ok*]
Mary had-to irgend-one man marry
'Mary had to marry some man or other (any man).'
- b. Taro-wa nomimono-o **nani-ka** kawa-nakerebanaranai (nan-demo ii kara)
Taro Top drink- Acc what-or buy-have to (what-even good as)
'Taro has to buy some drink or other (whatever is good).' [*any-choice-ok*]

On the other hands, case-marked indefinite pronouns accept [+IDEN] reading, as in (8a). Hagstrom (1988: 132) points out that case-marked *nani-ka* does not permit a donkey pronoun, as in (8b) and conveys Mamoru Saito's remark according to which "a case marking might in some way confer specificity", although "specificity" in this remark may be more properly described as [+IDEN] reading:

- (8)a. Taro-wa **nani-ka**-o katta [*+IDEN / -IDEN*]
Taro-Top what-or-Acc bought 'Taro bought something.'

- b. MIT Press-ga {***nani-ka**- o / **nani-ka**}syuppansur-eba, John-ga taitei sore-o yomu
 MIT Press-Nom {what-or-Acc / what-or} publish- if John-Nom in general it-Acc read
 ‘If MIT press publishes something or other, in general John reads it.’ (Hagstrom 1998: 132)

Similar effect of case-marking on interpretation is observed in another context. The disjunctive operator *-ka* can be detached from indeterminate pronouns. Nishigauchi (1990: 121) observes that, when it precedes the ablative marker *kara* (‘from’), both of [+IDEN] and [-IDEN] readings are possible, as in (9a), while, when it follows the case-marker, only [-IDEN] reading is accepted as in (9b). This author also remarks that “the semantics of PP [Post-positional Phrase]-*ka* is somewhere between an indefinite NP and an embedded question”:

- (9)a. henna mono-ga **nani-ka**-kara oti-tekita. [√+IDEN / √-IDEN]
 strange object-Nom what-or from fall-came
 ‘A strange object fell down from something’
 b. henna mono-ga **nani-kara-ka** oti-tekita. [*+IDEN / √-IDEN]
 strange object-Nom what-from-or fall-came
 A strange object fell down from I don’t know what’

Eguchi (1998) in effect shows that appositive indefinite pronouns (where the operator *ka* is not followed by case-marker) and embedded questions manifest a similar syntactic distribution: both of the two may be followed by their head nouns case-marked and underlined in (10a,b). This similar distribution justifies a parallelism treatment of the two cases:

- (10)a. **dare-ka** tomodati-ni denwasuru.
 who-or friend -Dat telephone
 ‘(I will) telephone to someone or other.’
 b. [**dare-ni** ikura kane-o watasu]-**ka** seejikenkin- no sikata-ni
 [who-Dat how much money-Acc give]-or political financial contribution-Gen way-Dat
 kaisy-a no mirai-ga kakatteiru. (Eguchi 1998 : 9)
 society-Gen future-Nom depend
 ‘The future of the society depends on the way of financial contribution to politicians, that is, to whom and how much contribution we will pass’

2.2. Focus particle *nanka*

The focus particle *nanka* in (11b,c) can be compared with the sequence *ka dare-ka* (‘or who-or’) in (11a) which transmits hedge reading (“I’m not sure if a letter came from Taro.”). Just as the latter expression, *nanka* serves to introduce the alternatives of the focus: *Taro nanka* in (11b) can be paraphrased by ‘Taro or other (the like)’ just like *Taro-ka dare-ka* (‘Taro or who-or’), although the disjunction relation between the focus and the alternatives is not explicitly marked. Curiously, the focus particle *nanka* doesn’t induce hedge reading, while the sequence *ka dare-ka* doesn’t naturally admit derogatory reading, discussed in Introduction:

- (11)a. tegami-ga Taro-ka **dare-ka** kara kita. [hedge]
 letter Nom Taro or who-or from came ‘A letter came from Taro or other’
 b. tegami-ga Taro **nanka** -kara kita. [√exemplification / √derogatory]
 letter Nom Taro NANKA from came ‘A letter came from Taro {and the like/ of all people}.’
 c. tegami-ga Taro-kara **nanka** kita. (=5) [*exemplification / √derogatory]
 letter Nom Taro-from NANKA came ‘A letter came from Taro {*and the like/ of all people}’

It should also be noticed that just as in the cases of indefinite pronouns, case-marking has

disambiguating effects on the interpretations of the focus particle *nanka*. When preceding a case-marker as in (11b), *nanka* evokes not only derogatory reading, but also exemplification reading. (“Letters came from other people than *Taro*”): *Taro nanka* of this reading is paraphrased by ‘Taro and the like’. On the other hand, when following a case-marker as in (11c), *nanka* admit only derogatory reading.

Such a correlation between case-marker positions and accepted interpretations is also observed with another focus particle *nante*: this particle follows a case-marker, as in (12b), but never precedes it, as in (12a)¹: it permits derogatory reading, but not exemplification reading:

- (12)a. *tegami-ga Taro **nante**-kara kita
 letter NomTaro NANTE from came
- b. tegami-ga Taro-kara-**nante** kita [*exemplification /√derogatory]
 letter Top Taro-from-NANTE came ‘A letter came from Taro{*and the like/ of all people}.’

For the following discussion, three more remarks are in order:

- (i) The exemplification reading reduced to conjunction of the focus and the alternatives is not observed in episodic contexts with FC items in other languages (ex. *irgend* in German or *quelconque* in French). In effect, the derivation from disjunction ‘A∨B’ to conjunction ‘A∧B’ should be excluded in view of the scalar implicature since conjunction is stronger (more informative) than disjunction;
- (ii) The affective value transmitted by *nanka* is not limited to derogatory reading, but a simple surprise: in this case, (11c) simply indicates that the speaker didn’t expect that Taro might send her a letter;
- (iii) Intuitively, in exemplification reading, the extensional side of alternatives is talked about, while derogatory / surprise meaning puts forth the intensional side: in the latter reading, the focus *Taro* is presented as having some property contradictory to the veri-conditional content of the sentence.

2.3. Summary and problems to answer

The results obtained in § 2 are summarized as follows:

- (i) The interpretations of indefinite pronouns are parallel to those of the focus particle *nanka*. In case-marked positions, the former admits [+IDEN] and [-IDEN] readings and the latter accepts exemplification and derogatory readings;
- (ii) In non-case marked positions or when the disjunctive operator *ka* occurs in non-case marked positions, the former leads only to [-IDEN] reading and the latter accepts only derogatory reading.
- (iii) [-IDEN] indefinite pronouns manifest a syntactic distribution similar to indirect questions, which suggests a semantic similarity between [-IDEN] indefinite pronouns and questions.

Japanese data thus show that exemplification reading may be treated as parallel to [+IDEN] reading, and support the existence of some correlation between [-IDEN] reading and derogatory reading, which is already noticed in the studies of German FC determiner *irgend*. But crucially, the fact that [-IDEN] and derogatory readings are not expressed by the same form indicates that these two readings should not be treated in totally the same way. In the next section, I will examine if previous analyses on FC items can make sense of these Japanese data.

3. Previous analyses of indefinite-based FC effects

3.1. From widening to FC

Kratzer & Shimoyama (2002: 17) claim, following Kadmon & Landman (1993), that “*irgendein*, like any free choice item, induces maximal widening of the set of alternatives as part of its lexical meanings”

¹ This restricted distribution of *nante* with respected *nanka* may be due to the fact that the former etymologically includes a Comp marker *te* representing a quotation of another person’s utterance. In effect, (12b) is naturally uttered when the speaker repeats, with surprise, an utterance “A letter came from Taro” uttered by another person.

and reduce *any-choice-is-ok* reading of (13) to an anti-exhaustivity implicature:

- (13) Mary musste **irgendeinen** Mann heiraten. (=7a) [$\sqrt{\text{any-choice-is-ok}}$]
 Mary had-to irgent-one man marry
 ‘Mary had to marry some man or other (any man is an accepted choice)’

They first apply, to the analysis of indefinite pronouns, Hamblin’s analysis of questions in terms of disjunction of propositions. According to this analysis, a proposition *Mary marries some man* boils down, in a Model where there are only two men, John and Taro, to a disjunction of propositions ‘Mary marries John’ [=A] \vee ‘Mary marries Taro’ [=B]. From this view, the literal meaning of (13) and its *any-choice-is ok* reading are respectively noted by ‘ $\square(A \vee B)$ ’ and ‘ $\diamond A \wedge \diamond B$ ’. These authors propose to derive from the former to the latter by the following reasoning: “Why didn’t the speaker say a stronger claim ‘ $\square A$ ’ than ‘ $\square(A \vee B)$ ’? Either because it might be that ‘ $\square A$ ’ is false, or because it might be that ‘ $\square A$ ’ is true but that its exhaustive inference ‘ $\neg \square B$ ’ is false. We infer ‘ $\square A \rightarrow \square B$ ’. In the same way, we infer ‘ $\square B \rightarrow \square A$ ’. We conclude ‘ $\square A \Leftrightarrow \square B$ ’. Together with ‘ $\square(A \vee B)$ ’, we conclude ‘ $\diamond A \wedge \diamond B$ ’.

The relevance of widening of alternatives is supported, according to Kratzer & Shimoyama, by Negative Polarity Item (NPI) like effect induced by *jemand* in the scope negative quantifier, ex. *niemand* (‘nobody’) in (14): *irgend* serves to maximally widen disjoined alternatives. Negation converts a disjunction of maximally widened alternatives to a conjunction of maximally widened negated alternatives, which is exactly the meaning corresponding to NPI effect. The idea that FC effects are derived from widening of alternatives through anti-exhaustivity implicature is adopted by other studies (ex. Chierchia 2006):

- (14) Niemand musste **irgendjemand** einladen. (ibid.) [$\sqrt{\text{NPI}}$]
 Nobody had to irgent-one invite. ‘Nobody had to invite anybody’

Aloni & Rooij (2004) however put into question this reasoning, by pointing out that it should lead, also in episodic contexts, a conjunction, ‘ $A \wedge B$ ’, from a disjunction ‘ $A \vee B$ ’. But such an implicature is not usually observed. Jayez & Tovena (2006) further observe that NPI effect remains even when the domain of alternatives is limited, as in (15a), which indicates that widening is only a side effect of FC:

- (15)a. Marie n’a pas lu un quelconque de ces trois livres. (Jayez & Tovena 2006: 236) [$\sqrt{\text{NPI}}$]
 ‘Mary did not read any of these three books whatsoever’
 b. Taro-wa nomimono-o **nani-ka** kawa-nakat-ta. [$*\text{NPI}$]
 Taro-Top drink- Acc what-or buy-Neg-Pst
 ‘Taro didn’t buy some drink or other / * Taro didn’t buy any drink.’

As regards appositively used indefinite pronouns, like *nani-ka*, although they manifest FC effects in other respects, they doesn’t induce NPI effect in negative sentences, as in (15b). This observation suggests that the widening-based approach does not apply to Japanese indefinite FC items.

3.2. From multi-membered alternatives to FC

Fox (2006) and Aloni & Rooy (2007) refer, as Kratzer & Shimoyama (2002), to conversational implicature so as to make sense of [–IDEN] reading of FC items. These authors propose to derive it, in terms of Grician Maxim of Quantify in (16):

- (16) Maxim of Quantity: “If S1 and S2 are both relevant to the topic of conversation and S1 is more informative than S2, if the speaker knows (or believes) that both are true, she should utter S1 rather than S2”. (Fox 2006).

- (17)a **Irgendjemand** hat angerufen. (=3a) [$*+IDEN / \surd-IDEN / \surd$ derogatory]
 Irgend-one has called. ‘Someone or other called.’
 b. $A \vee B \rightarrow \text{Know}(A \vee B) \wedge \neg \text{Know}(A) \wedge \neg \text{Know}(B) \wedge \neg \text{Know}(A \wedge B)$

In a Model where there are only two persons, Mary and John, (17a) boils down to saying “Mary called [=A] \vee John called [=B]”. The disjunction of these two propositions next conversationally implicates, by way of (16), that the speaker doesn’t know if A is true and that she doesn’t know if B is true, as in (17b), and therefore that she cannot identify the person who called. We thus obtain [-IDEN] reading.

Aloni & Rooy (2007) further propose to derive derogatory reading by slightly modifying (16) and by supposing the implicature “If the speaker said ‘ ϕ ’, she only cares about ϕ being true and she doesn’t care if the alternatives are true or not” (Aloni & Rooy 2007: 16). Thus, in the same Model, (17a) conversationally implicates, as shown in (18a), that the speaker doesn’t care about if A is true and that she doesn’t care about if B is true. We thus obtain derogatory reading which says that the speaker doesn’t care about the person who called:

- (18)a. $A \vee B \rightarrow \text{Care about}(A \vee B) \wedge \neg \text{Care about}(A) \wedge \neg \text{Care about}(B) \wedge \neg \text{Care about}(A \wedge B)$
 b. $A \vee B \rightarrow \text{Believe}(A \vee B) \wedge \neg \text{Believe}(A) \wedge \neg \text{Believe}(B) \wedge \neg \text{Believe}(A \wedge B)$

By the way, in §2.2, it was noted that the particle *nanka* may transmit not necessarily derogatory reading, but also a simple surprise reading. We can obtain, along the above analysis, the surprise reading (i.e. the speaker cannot believe that Taro sent her a letter) by replacing *know* by *believe* in Maxim of Quantity, as represented in (18b).

Such a parallel treatment of [-IDEN] reading and derogatory / surprise reading however does not seem to be able to make sense why the appositive *nani-ka* doesn’t (at least normally) admit derogatory reading, while the focus particle *nanka*, which is grammaticalized from the indefinite pronoun *nani-ka*, doesn’t (at least normally) accept [-IDEN] (hedge) reading, as seen in Introduction.

More seriously, the analysis of the focus particle *nanka* in (19) in terms of (18a,b) implicates that the speaker cares about or believes that “Taro or the alternative (ex. Mary) sent her a letter”. But this implicature is not obtained intuitively. Rather, as discussed in § 2.2, derogatory / surprising *nanka* doesn’t induce extensionally the existence of alternatives:

- (19) tegami-ga Taro **nanka** -kara kita. [\surd derogatory / \surd exemplification]
 letter Nom Taro NANKA from came ‘A letter came from Taro {of all / and the like}’

3.3. Summary

Among previous approaches to indefinite based FC effects, the analysis based on widening (ex. Kratzer & Shimoyama 2002) doesn’t appear to naturally apply to FC effect of appositive indefinite pronouns. Another analysis in terms of Maxim of Quantity (ex. Aloni & Rooy 2007) applies well to [-IDEN] reading of appositive indefinite pronouns. But its simple application to derogatory / surprise reading of the focus particle *nanka* caused some problems.

Furthermore, previous analyses cannot make sense how exemplification reading (conjunction of the focus and the alternative in episodic context) is derived.

4. Proposals

In this section, I will advance my hypotheses concerning the two problems pointed out in § 3.3. I will first clarify the semantics of derogatory and exemplification readings, by referring to Aloni (2007) (§ 4.1) I will next explain the derivation of derogatory meaning of *nanka* in terms of Jayez & Tovena (2006)’s definition of FC (§ 4.2). I will then try to make sense how this disjunction-based FC item arrives to express exemplification reading (i.e. conjunction of the focus and the alternatives), adopting Simon (2005)’s and Winter (1995)’s generalizations about disjunction and conjunction (§ 4.3).

4.1. Two readings of indefinites and two readings of disjunction

In § 3.1, I argued that Kratzer & Shimoyama (2002)’s analysis of FC effect in terms of widening was problematic. If their approach is not adopted, we need, in order to distinguish [+IDEN] reading (ex. *jemand* in (20a)) from [-IDEN] reading (ex. *irgendjemand* in (20b)), another way than supposing different alternative domains (ordinary domain for the former and widened domain for the latter):

- (20)a. *Jemand* hat angerufen. (Kratzer & Shimoyama 2002: 10) [$\sqrt{+IDEN} / \sqrt{-IDEN}$
 somebody has called. ‘Someone called’
 b. **Ir**gendjemand hat angerufen. (=3a) [$*+IDEN / \sqrt{-IDEN}$
 Irgend-one has called. ‘Someone or other called.’

Aloni (2007) proposes to distinguish indefinites whose set of alternatives is singleton, as in (21a), from those that induce multi-membered alternatives, as in (21b). These two cases are intuitively represented by (21a’) and (21b’). (21b) remind Hamblin semantics of a question in terms of a set of propositions. (21a) naturally applies to [+IDEN] singular indefinites denoting a referent uniquely identified for the speaker, while (21b) to [-IDEN] indefinites, like *irgendjemand* in (20b) and an appositive indefinite pronoun *nani-ka* in (22). Such use of *nani-ka* in effect requires, as seen in § 2.1, multi-membered alternatives and shows a syntactic distribution similar to embedded questions:

- (21)a. $\exists x.Called(x)$ a’. [$\exists x.Called(x)$] [+IDEN]
 b. $\exists p(p \wedge \exists x(p = Called(x)))$ b’. [$Called(d1)$] [$Called(d2)$] [...] [-IDEN]
 (22) Taro-wa nomimono-o **nani-ka** kattta (=2a) [$*+IDEN / \sqrt{-IDEN}$
 Taro-Top drink- Acc what-or bought
 ‘Taro bought some drink or other (some drink which I cannot identify)’

Aloni (2007) further argues that sentences including disjunction are ambiguous between cases denoting a singleton proposition, formalized by (23a) and intuitively represented by (23a’) and those denoting a set of alternative proposition, as signaled by (23b) and (23b’). In questions, as in (24), the representations (23a) and (23b) give birth respectively to a polar question whose expected answers are *yes/no*, as in (24a), and to an alternative question whose expected answers are noted in (24a):

- (23) Mary or Taro came.
 a.. $\exists p(p \wedge p = (Mary\ came \vee Taro\ came))$ a’. [$Mary\ came \vee Taro\ came$]
 b. $\exists p(p \wedge p = (Mary\ came) \vee (p = (Taro\ came)))$ b’. [$Mary\ came$] [$Taro\ came$]
 (24) A: Did Mary or Taro come?
 a. B: Yes / No. b. B: Mary came. / Taro came.

Now let’s examine the sequence *ka dare-ka* (‘or who-or’). A question including this sequence serves as a polar question, as in (26a), but difficultly as an alternative question, as in (25b). This result indicates that the first occurrence of *ka* induces only a singleton proposition. The second occurrence potentially might induce either a singleton alternative for [+IDEN] *dare-ka*, or multi-membered alternatives for [-IDEN] *dare-ka*. We might thus obtain, for hedge reading of (26), two types of representations (26a,a’) and (26b,b’):

- (25) A: tegami-ga Taro **ka dare-ka**-kara kita-ka?
 letter Nom Taro or who-or from came-or (Q)
 ‘Did a letter come from Taro or someone?’
 a. B: Yes. / No. b. B: ??From Taro. / ??From someone.
 (26) tegami-ga Taro **ka dare-ka**-kara kita. [hedge]
 letter Nom Taro or who-or from came ‘A letter came from Taro or other’

- a. $\exists p (p \wedge p = (a \text{ letter from Taro came} \vee \exists x (a \text{ letter from } x \text{ came})))$
 a'. $[(a \text{ letter from Taro came}) \vee \exists x (a \text{ letter from } x \text{ came})]$
 b. $\exists p (p \wedge (p = (a \text{ letter from Taro came}) \vee \exists x (p = a \text{ letter from } x \text{ came})))$
 b'. $[(a \text{ letter from Taro came}) \vee (a \text{ letter from } d1 \text{ came}) \vee (a \text{ letter from } d2 \text{ came}) \vee \dots]$

In interrogative sentences, as in (25), the two representations are surely available. But in declaratives, as in (26), if the speaker knows the identity of the alternatives, she should explicitly mention it in view of Maxim of Quantity in (16). The hedge reading induced by the sequence *ka dare-ka* ('or who-or') in declarative sentences is therefore represented by (26b,b').

As shown in § 2, exemplification and derogatory readings of the focus particle *nanka* are respectively parallel to [+IDEN] reading in (21a), and to [-IDEN] reading in (21b). A question including the focus particle *nanka* can only be a polar question and not an alternative question, as shown in (27a,b) (in any way, in the cases of the exemplification *nanka*, the disjoined alternatives don't exist). This result indicates that the implicit disjunction preceding *nanka* induces a singleton alternative, as in the case of *ka dare-ka*:

- (27) A: tegami-ga Taro **nanka** -kara kita-ka? [derogatory / exemplification]
 letter Nom Taro NANKA from came-or 'Did a letter come from Taro {of all / and the like}?'
 a. B: Yes / No. b. B: *From Taro. / *From someone

I therefore advance the hypothesis that the exemplification reading is represented by (26a,a'), while the derogatory reading by (26b,b').

4.2. Derivation of derogatory reading

According to the above hypothesis, the derogatory *nanka* as well as [-IDEN] *dare-ka* are signaled by the same representations in (28a,b):

- (28)a.. $\exists p (p \wedge (p = (a \text{ letter from Taro came}) \vee \exists x (p = a \text{ letter from } x \text{ came})))$ (= (26b))
 b. $[(a \text{ letter from Taro came}) \vee (a \text{ letter from } d1 \text{ came}) \vee (a \text{ letter from } d2 \text{ came}) \vee \dots]$ (= (26b'))

Both of the two forms can be analyzed as FC items, in view of their hedge or derogatory readings possessed in common by FC items in other languages (*irgend*, *quelconque*, etc.). And I adopt Jayez & Tovena (2006)'s idea that "the equivalence among members of the restriction [=alternatives] [...] is the hallmark of FC items in general" (Jayez & Tovena 2006: 218). I then claim that the difference between derogatory *nanka* and [-IDEN] *dare-ka* is due to that of the nature of the alternatives:

- (i) The alternatives of [-IDEN] *dare-ka* (*d1*, *d2*, *d3*... in (28b)) are extensionally induced. The focus *Taro* and the alternatives are treated as equivalent as for the possibility to satisfy the truth of the proposition. We thus obtain the implication that the speaker doesn't know if a letter came from the focus *Taro* (hedge reading);
 (ii) The alternatives of derogatory *nanka* are indexed only intensionally because of its semantic bleaching of the indefinite part *nan* ('what'). The essence of FC requires that the focus and the intensional alternatives are treated as equivalent. Consequently, some feature commonly possessed between the two is put forth. In this respect, *Taro nanka* may be paraphrased more properly as "the like of *Taro* (the alternatives that have some common feature with the focus)". From relevance theoretical perspective, the mention of the intensional alternatives is justified only if the common feature in question is contextually noteworthy, that is, if it is not expected from the veri-conditional content of the sentence. We thus obtain the implication that the fact that "A letter came from *Taro*" is not expected or

not appropriate (derogatory reading)².

4.3. Derivation of exemplification (conjunction) reading

In terms of the hypothesis advanced in § 4.1, the exemplification reading of the focus particle *nanka* is represented by (29a,b) where the alternatives are identified by the speaker:

- (29)a. $\exists p (p \wedge p = (a \text{ letter from Taro came} \vee \exists x (a \text{ letter from } x \text{ came})))$ (=26a))
 b. $[(a \text{ letter from Taro came}) \vee \exists x (a \text{ letter from } x \text{ came})]$ (=26a')

But in terms of Maxim of Quantity in (16), if both of the focus and the alternatives are relevant for the discourse, the speaker should explicitly mention the identity of the latter. From this viewpoint, the fact that she lets it implicit suggests that the alternatives are not relevant for the discourse, or in other words, that the focus and the alternatives are discursively not symmetric.

An argument comes in favor of this reasoning. When (30) transmits the exemplification reading, it is not followed by (30a) but naturally by (30b). This difference indicates that the truth of (30) is influenced by the validity of the focus, but not (at least in the same way) by that of the alternatives:

- (30) A: tegami-ga Taro **nanka** -kara kita. [exemplification]
 letter Nom Taro NANKA from came 'A letter came from Taro and the like'
 a. B: ??It's not true. We received a letter from Taro but from no one else.
 b. B: It's not true. We received a letter from someone but not from Taro.

As discussed above, the essence of FC is the equivalence among the alternative members. A similar characterization is proposed by Simons (2005) for disjunction: according to this author, disjunction is conversationally licensed only if each disjunct is symmetrical, that is, has some independent effect on the truth condition and possesses in common some salient property. Winter (1995) further points out that from the cross-linguistic perspective, conjunction may be implicit, while disjunction should be visible.

From these viewpoints, the asymmetry between the focus and the alternatives leads to reinterpret their invisible disjunction relation by conjunction relation. We thus obtain the implication that "a letter came from Taro and the like" (exemplification meaning). In this case, the focus particle *nanka* is no longer exactly analyzed as FC item defined as inducing equivalent (or symmetrical) alternatives.

5. Conclusion and further research

The results of this study based on the two FC items in Japanese (appositive indefinite pronouns and focus particle *nanka*) are summarized as follows:

- (i) Widening may not be a core feature of these two forms;
- (ii) The already acknowledged correlation between ignorance (or [-IDEN]) and derogatory readings is confirmed by parallel distribution of the two forms. But the fact that these two readings are not expressed by the same form indicates that they should not be treated totally in the same way. Rather, the former is obtained when the non-identified alternatives are extensionally induced, while the latter

² The same form may evoke both of extensional and intensional sides of the alternatives. Thus, the French indefinite article may induce hedge and derogatory readings as in (1a,b). In these cases, the indefinite article serves to introduce the alternatives of monsieur Girard or Paul:

- (1)a. **Un** monsieur Girard a téléphoné. [hedge: the alternatives are extensional]
 'Mr. Girard or the like called.'
 b. Je ne verrai plus **un** Paul. [derogatory: the alternatives are intensional]
 'I will never see the like of Michel)'

occurs when their intensional side is put forth by the grammaticalized form;
(iii) The grammaticalized FC item may lose its essential feature (the equivalence among the alternative members) and may give rise, in terms of Maxim of Quantity, conjunction reading.

It will be interesting to examine if similar correlations between the types of FC effects and the grammaticalisation of FC items are observed in other languages.

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Intension, free choiceness and the role of ‘mo’ in Japanese

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1. Introduction

It is widely accepted that the notions of intensional quantification and variation play a central role in the recent literature on Free Choice Items (FCI) (Kadmon and Landman, 1993; Dayal, 1995, 1998; Horn, 1989, 2000; Giannakidou, 2001; Jayez and Toven, 2005 among others). Researchers have reached agreement on the modal view of FCI, that individuals which satisfy sentence are picked in different possible worlds. However, if FCI can be taken to contribute a universal quantifier in some cases and an existential indefinite in others, how do we decide what it means and is there something that derives their quantificational status in FCIs? The purpose of this paper is to show that the fact that FCIs have universal and existential readings is not puzzling anymore: FCIs are treated formally as function with as domain the elements in the possible worlds/situations \times the set of time points (reference points). That is, they are variables over individuals of type $\langle s, e \rangle$, or behaves as predicates on this individual concept of type $\langle \langle s, e \rangle, t \rangle$. Crucial evidence for this analysis involves Japanese ‘N-mo’ phrases, including common and proper nouns as host N, whose interpretation may vary with the reference points. As theoretical background, we adopt Janssen (1984).

2. The Japanese Indeterminate Quantification

In Japanese, an indeterminate quantifier consists of two parts: (i) an indeterminate pronominal expression and (ii) a focus-induced particle ‘mo’ or ‘ka’. Generally ‘mo’ and ‘ka’ are assumed to carry a quantificational force. Analyses of particle ‘mo’ have focused on the fact that ‘mo’ contributes not only universal quantification in the universal series in (1a), but also existential quantification in the NPI series in (1b).

(1) A (partial) list of indeterminate pronouns

dare (person)	dore(thing)	doko(place)
a. da're-mo (everyone)	do're-mo (everything)	do'ko-mo (everywhere)
b. dare-mo (anyone NPI)	dore-mo (anything NPI)	doko-mo (anywhere NPI)
c. dare-de-mo (anyone FC)	dore-de-mo (anything FC)	doko-de-mo (anywhere FC)

Shimoyama (2001, 2006) adopts Hamblin’s (1973) semantics of questions for the indeterminate pronouns, such that they denote a set of alternatives. Unlike previous authors, she proposes that ‘mo’ in indeterminate-‘mo’ phrases always contributes universal

quantification, so that the indeterminate-‘mo’ NPIs are quantifiers of type $\langle\langle\tau,t\rangle,\langle\langle\tau,t\rangle,t\rangle\rangle$, where τ is a variable standing for any category as in (2). This entails the ‘mo’-phrase denotation is as shown in (3).

(2) $MO = \lambda P \lambda Q \forall x [P(x) \rightarrow Q(x)]$, where $x \in D_e$, and $P, Q \in D_{\langle e,t \rangle}$

(3) $[[X]mo] = \lambda Q \forall x [[X](x) \rightarrow Q(x)]$, of type $\langle\langle e,t \rangle, t \rangle$

According to Shimoyama, a common syntactic assumption that NPIs undergo movement to Spec of NegP, i.e. outside the syntactic scope of negation, is suitable for deriving the interpretation. For instance, (4a) asserts (5a) and (4b) asserts (5b). Since the narrow scope existential analysis and the wide scope universal analysis are indistinguishable: (4a) and (4b) are identical.

- (4) a. *Dare-mo ko-nakat-ta.*
 anyone-MO come-NEG-PAST
 (No one came.)
 b. *Da're-mo ko-nakat-ta.*
 Everyone-MO come-NEG-PAST
 (Everyone did not come.)
- (5) a. $\neg \exists x [\text{person}(x) \wedge \text{came}(x)]$
 b. $\forall x [\text{person}(x) \rightarrow \neg \text{came}(x)]$

Thus, in both cases, *dare-mo* denotes the set of people in the given context. When presented with a more detailed picture of how indeterminate-‘mo’ NPIs are interpreted, however, *dare-mo* in (4a) can be interpreted to be the focus-induced alternatives that will be a sum of variables assigned distinct values in different worlds/situations. This seems to be very similar with the i(dentity)-alternatives in the sense of Giannakidou (2001:705):

(6) i-alternatives

A world w_1 is an i-alternative wrt α iff there exists some w_2 such that
 $[[\alpha]]^{w_1} \neq [[\alpha]]^{w_2}$.

The two i-alternatives are worlds w_1 and w_2 and agree on everything without a value assigned to α . Let us try to see how this idea interacts with the interpretation of (4a). Assuming a model containing three worlds $W = \{\text{world}_1, \text{world}_2, \text{world}_3\}$ and three individuals $D = \{\text{person}_1, \text{person}_2, \text{person}_3\}$, (4a) could be true in the following state of affairs:

- (7) a. $w_1: g(x) = \text{person}_1$
 $\llbracket \text{person}(x) \wedge \text{came}(x) \rrbracket^{w_1, g} = 1$
 b. $w_2: g(x) = \text{person}_2$
 $\llbracket \text{person}(x) \wedge \text{came}(x) \rrbracket^{w_2, g} = 1$
 c. $w_3: g(x) = \text{person}_3$
 $\llbracket \text{person}(x) \wedge \text{came}(x) \rrbracket^{w_3, g} = 1$

Notice that in this model, the assignment function g assigns a different individual to x in each world and the available values are exhausted. However, (4a) contains negation and *dare-mo* phrases undergo movement to Spec of NegP, where it takes the whole proposition as its argument. Therefore, (4a) can be analyzed as in (8).

- (8) $\lambda w \lambda x [\text{person}(x)(w) \wedge \neg \text{came}(x)(w)]$

In this reading, ‘mo’ contributes to induce the set of people whose interpretation/value would vary with the worlds/situations, rather than a set of people in one world/situation. Formulated in Giannakidou’s (2001) terminology of the FC determiner: ‘mo’ is a type-shifter of type $\langle\langle e, t \rangle, \langle s, \langle e, t \rangle \rangle$, which returns an intensionalized property as its output. However, what is an intensionalized property? How can one derive universal and existential FC readings?

3. The Japanese FCIs

The above observation shows that ‘mo’ contributes to induce the set of variables not only in one world but also in *i*-alternative worlds and prompts *dare-mo* phrases to denote intensionalized property as a FCI. Before tackling the above-mentioned questions, the basic picture of Japanese FCI will be briefly examined.

3.1 Donna CN- mo

Let us start with Hamamoto’s (2004) recent proposal on “*donna CN-mo*” *any CN/n’import quel CN* in comparison with “*dono CN-mo*” *every CN*. He adopts Giannakidou’s (2001: 666) analysis for FCIs, such that FCIs are intensional indefinites that can be interpreted in a sentence only if the sentence provides possible worlds/situations which can serve as identity alternatives inducing variation. In this vein, Hamamoto proposes that “*donna CN-mo*” *any CN* has an intensional interpretation, while “*dono CN-mo*” *every CN* has an extensional interpretation as found in sentences such as (9):

- (9) a. Donna keeki-de mo tabe-te-ii.
 any cake-COPULA MO eat-may-PRESENT
 (You may eat any cake.)
- b. Dono keeki-de mo tabe-te-ii.
 which cake-COPULA MO eat-may-PRESENT
 (You may eat every cake.)

(9a) is acceptable before arriving at a cafeteria. However, (9b) is unacceptable in the same situation. It can be acceptable only if there exist couple of cakes and with the speaker's recognition. This difference in distributional constraint indicates that in the sentence (9b), the sister phrase of 'mo' denotes the set of the alternative individuals in the context, i.e. type $\langle e, t \rangle$. Thus "dono CN-mo" *every CN* is of type $\langle \langle e, t \rangle, t \rangle$. On the other hand, (9a) differs from (9b) in that 'mo' composes with the sister phrase "donna CN". Hamamoto takes this "donna" to be an intrinsic modal element, in the sense of Dayal (1998). (10) is the analysis of "donna" in Hamamoto (2004: 330):

$$(10) \parallel \text{donna} \parallel = \lambda P \text{ARB}_w \lambda x [P(x)(w)]$$

Based on this analysis, Hamamoto posits that the ambiguity between universal and existential reading of "donna CN-mo" *any CN* due to the option of binding situations by the arbitrary operator (*ARB*), which is sensitive to the context, but not due to the universal/existential quantification over possible situations. Since possible modal operator is an existential quantifier, (9a) could be analyzed as in (11).

- (11) a. Donna keeki-de mo tabe-te-ii.
 (You may eat any cake.)
- b. [MAY [eat (you, ANY cake)]]
- c. $\exists w, x [\text{ARB}(w) \wedge \text{cake}(x, w)] \rightarrow \text{eat}(\text{you}, x, w)$

The arbitrary operator *ARB* may restrict possible worlds/situations that correspond to the current possibilities, thus avoiding the modal overflow. However, as pointed in the literature, this kind of operator allows rescuing the anomalous sentences like (12).

- (12) *Donna hito-mo yuusyoku-o tabe-nakat-ta.
 any person- MO dinner-ACC eat-NEG-PAST
 (Any person did not eat the dinner.)

The second problem is the obligation modals. For instance, "donna CN-mo" *any CN* can appear even in episodic sentence including determinant expression like "senshyuu" *last week*,

which is not at all modalized, as in (13).

- (13) Sensyuu, Byooki-no-toki, Mary-wa donna tabemono-de mo tabe-ta.
last week sickness-GEN-time Mary-TOP any food-COPULA MO eat-PAST
(When Mary was sick last week, she ate any food.)

If “donna” is an inherent modal element, it might be filtered out in the extensional veridical episodic context like (13). The compatibility with (13) is incompatible with the idea that “donna CN-mo” *any CN* is bound by arbitrary operator (cf. Hamamoto) or nonveridical operator (cf. Giannakidou). Moreover, it is not clear how Hamamoto’s approach accounts for the fact that FCIs can have universal and existential readings. Hence, the discussion suggests that we cannot take “donna” to be a modal operator, rather it composes indeterminate pronoun with CN and prompts it to be intensionalized in association with ‘mo’. This conclusion, however, does not constitute an account of what is an intensionalized property and how/why one can derive universal and existential FC readings.

3.2 Euphemistic ‘mo’-phrase

At this point, let us note the fact that particle ‘mo’ can also be licensed when it occurs with a common noun (CN), proper-noun in subject-topic position, as shown in (14).

- (14) a. Haru-mo takenawa-ni nari-masi-ta.
spring-MO furious-AUXIL become-PAST
(The spring grew fast and furious.)
b. {Taroo/Musuko}-mo seizin-si-ta.
Taroo/son-MO grow up-DO-PAST
({Taroo/My son} grew up.)
c. Kotosi-mo ositumat-te-ki-ta.
this year-MO get close to the end-PAST
(We are getting close to the end of the year.)
d. Gaman-mo genkai-da.
patience-MO limit-COPULA-PRESENT
(I am at the limit of my patience.)
e. Kare-mo mekkiri fuke-ta.
he-MO a lot age-PAST
(He has aged a lot.)
f. Yo-mo fuke-ta.
night-MO advance-PAST
(The night has advanced.)

- g. Kimi-mo mekkiri fuke-ta-na.
 you-MO a lot age-PAST-DISCOURSE PARTICLE
 (You have aged a lot.)
- h. Utage-mo takenawa-ni nari-masi-ta.
 banquet-MO furious-AUXIL become-PAST
 (The banquet has grown fast and furious.)

One may call of ‘mo’ involved in (14) “yawarage no ‘mo’, *euphemistic ‘mo’*, after Numata(1986). Generally, ‘mo’ phrases composed with CN and proper-noun introduce a focus-induced alternative, as in “John-mo ki-ta” *John came also*, which has the hidden presupposition such that Mary and Bill came. However, the euphemistic ‘mo’ phrase does not introduce an alternative set. For instance, (14a) does not imply that the summer grew fast and furious. As far as I know, there is no clear explanation for the semantic property of the euphemistic ‘mo’ in the literature. Historically, it is assumed that the euphemistic ‘mo’ triggers an allusion to an alternative set; as a result, this type of ‘mo’ can attenuate indirectly the meaning of sentences or express authors’ feeling/emotion toward the current event described by the sentence.

Despite this inability to define the semantic status of euphemistic ‘mo’, this type of ‘mo’ associates with a stable licensing environment: it is infelicitous in generic sentences as in (15), assuming that ‘mo’ is euphemistic one.

- (15)a. *Musuko-mo itosi-i.
 son-MO be precious-PRESENT
 (Son is precious)
- b.* Haru-mo yoake-ga yo-i.
 spring-MO dawn-NOM good-PRESENT
 (The spring is best in dawn.)

Furthermore, it is neither permitted in episodic sentences including determinant expressions like “kinoo” *yesterday*, as in (16a), nor in epistemic modal context, as in (16b).

- (16) a. *Kinoo, haru-mo takenawa-ni nari-masi-ta.
 yesterday spring-MO fast and furious-DAT become-PAST
 (Yesterday, the spring grew fast and furious.)
- b.*Haru-mo takenawa-ni nare-ru.
 spring-MO fast and furious-DAT can become-PRESENT
 (The spring can grow fast and furious.)

If ‘mo’ always contributes universal quantification, it must be recognized that NPs with ‘mo’ in (14) can be universal. Given these facts, however, one cannot reasonably hope to assimilate

all cases of ‘mo’ to the universal. Rather, it seems that *haru* (spring)-*mo* and *musuko* (my son)-*mo* in (14) imply a ‘history’, i.e. the domain shift along the time lines, of host NPs. In other terms, their denotation may vary with the domain shifts; the different time points may contain different set of spring or son’s aspects. Let us see now how this idea works with i(dentity)-alternatives. Assuming a model containing three worlds $W = \{\text{world}_1, \text{world}_2, \text{world}_3\}$ and three predicate $P = \{\text{come, grow, deepen}\}$, (14a) could be true in (17b) among the following state of affairs:

- (17) a. $w_1: g(x) = \text{spring}_1$
 $\llbracket \text{spring}(x) \wedge \text{come}(x) \rrbracket^{w_1, g} = 1$
 b. $w_2: g(x) = \text{spring}_2$
 $\llbracket \text{spring}(x) \wedge \text{grow}(x) \rrbracket^{w_2, g} = 1$
 c. $w_3: g(x) = \text{spring}_3$
 $\llbracket \text{spring}(x) \wedge \text{deepen}(x) \rrbracket^{w_3, g} = 1$

Notice that in this model, the assignment function g assigns a different aspect of spring to x in each time point and the available values, i.e. spring aspects, are exhausted. In other term, ‘mo’ contributes to induce the set of spring aspects whose interpretation/value would vary with the time points. Therefore, all the members of the denotation of *haru* (spring)-*mo* are not on a par, but no individual is highlighted before being syntactically connected with a predicate. This is consistent with the idea (Giannakidou, 2001) that FC ‘mo’ is a type-shifter of type $\langle\langle e, t \rangle, \langle s, \langle e, t \rangle \rangle$, which returns an intensionalized property as its output. Moreover, this is consistent with the Non-Individuation constraint (Jayez and Toven, 2005:40) that a FCI is licensed in a sentence S if S (i) is not referential or (ii) communicates something that cannot be reduced to referential information. In the next section, we consider the issue of ambiguity and show that there is no need to appeal to universal or arbitrary operators.

4. The Proposal

The proposal I want to make here is that the shift in denotation follow from the fact that FC ‘mo’ is a type-shifter of type $\langle\langle \tau \rangle, \langle s, \tau \rangle \rangle$, where τ is a variable standing for any category, and FC ‘mo’ phrases can be a function from above mentioned reference points to the set of individuals. It is essential that they cannot be replaced by variables of type $\langle e \rangle$ or predicates of type $\langle e, t \rangle$.

In this vein, since, *haru* (spring)-*mo* and *Taroo*-*mo* in (14) are determined by the means of a set of properties, the former is the predicate (over individual concept¹) of type $\langle\langle s, e \rangle, t \rangle$ and

¹ According to Janssen(1984), an individual concept (IC) is by definition an element in $D_e^{I \times J}$; so it is a technical term for a function with domain $I \times J$ and range D_e . (the set D_e is the set of individuals and the elements in $I \times J$ are called reference points.)

the latter is the variable (over individual) of type $\langle s, e \rangle$. This means that the meaning postulates for CNs and proper nouns from PTQ do not apply to the occurrences in (14a, b) of *haru* and *Taroo* respectively. Hence, FC ‘mo’ phrases in (14) can be analyzed as expressing the property of an individual/individual concept. The translations of (14a, b) into intensional logic are given in (18a, b).

- (18) a. $\exists x [\text{spring}(x) \wedge \text{grew fast and furious}(x)]$
 b. $\exists x [\forall y [\text{Taroo}(y) \leftrightarrow x = y] \wedge \text{grew up}(x)]$

In (18a), x is a variable of type $\langle s, e \rangle$. Hence, (18a) determines an individual concept which has on each index as its extension the aspect of spring at that index. On the other hand, in (18b), x is a variable of type e . A particular individual is determined by means of a set of properties of individuals. In (14b), a particular individual like *Taroo/my son* with ‘mo’ may denote a function resembling an individual concept; it may yield for every index the different aspect of them. This function is quantified in, and (14b) says something about the current value of this kind of function. So *Taroo* may be treated formally as function from reference points to his realizations at each reference point. Therefore, in both cases, it can be said that the NPs in restrictor denote function, while they are existentially quantified by predication and denote the value of this function. Incorporating this way of analysis into indeterminate-‘mo’ FC, (19) is analyzed as (20).

- (19) Donna gakusei-de-mo kono mondai-ga toke-ru.
 any student de-MO this problem-NOM solve-can-PRES
 (Any student can solve this problem.)
 (20) $\forall y [\text{student}(y) \rightarrow \text{solve-this problem}(y)]$

The variable y in (20) is considered a variable (over individual concepts) of type $\langle \langle s, e \rangle, t \rangle$; y is not invariant across all accessible worlds. Note that under this analysis, FC ‘mo’ phrase will receive universal interpretation. The difference between existential readings in (14) and universal reading in (19) is thus reduced to a predicate difference, i.e. stage vs. individual level predicates. Assuming a Heim (1982) style LF is suitable for deriving the interpretation; in the former case, the FC ‘mo’ phrase is quantified in existential closure, in the latter case, the FC ‘mo’ phrase is mapped into restrictive clause in LF, receiving only the universal reading. In natural language, the NP is often ambiguous between functional and individual readings as in *the president changes*. This sentence has to be understood as stating that some other person becomes president, or as stating that his/her character changes. Therefore, on the individual reading, (14b) means “Taroo grew up also” and implies that there are others who grew up.

5. Conclusion

In essence, FCIs are in most cases treated as intensional indefinites, due to the limited distribution of FCIs in nonveridical and nonepisodic contexts. This distributional pattern develops a modal view of FCIs, where the individuals that satisfy the sentence are picked in different possible worlds. Despite this distributional pattern, FCIs are felicitous in some episodic/non-modal contexts. This motivates a move from the standard modal analysis to another view. For instance, Jayez and Tovenca (2005) propose an informational constraint they call Non-Individuation. It says that the information conveyed by the sentence with FCI should not be reducible to a referential situation. The Non-Individuation does not exclude non-modal information. Nevertheless, in Japanese, there exist sentences with FCI that can be reducible to a referential situation when FC ‘mo’ associates with a common noun or proper-noun in subject-topic position. Given the empirical problems of the modal view and the virtue of the Non-Individuation, a better approach might be to assume that FC ‘mo’ phrases can be a function from reference points to the set of individuals. Furthermore, if we assume that FCIs are basically functions, then the quantificational variability of FCIs can also be accounted for more naturally: the existential/universal interpretations of FCIs are determined depending on the predicate difference, i.e. stage vs. individual level predicates.

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Antisingleton Effects **Keywords: Free Choice, Indefinites, Implicatures.**

0. Claim. Domain shifting (DS) plays a crucial role in recent semantic analyses of indefinites: exceptional scope has been derived from maximal domain shrinking [7], and the behavior of free choice items (FCIs) from maximal widening [2,3]. Building on Matthewson [5], Kratzer [3] puts forth the hypothesis that indefinite determiners perform DS operations, and calls for an investigation of the typology of such operations. By analyzing the behavior of the Spanish indefinite *algún* in modal contexts, we show that the inventory of possible DS operations must include a constraint against singleton domains (minimal domain widening). This constraint triggers an implicature of modal variation, consistent with, but weaker than, free choice.

1. Domain Widening and Free Choice. German *irgendein* is an existential FCI [4]. When it scopes below the modal in (1), the sentence conveys, besides (2), that for every doctor d in the domain of quantification D , there is a (different) permitted world where Mary marries d ('the F(ree) C(hoice) C(omponent)'). Kratzer and Shimoyama [4] derive the FCC as a conversational implicature by assuming that *irgendein* signals that D is maximal. Simplifying: for any $D' \subset D$, (3) asymmetrically entails (2), so for any $D' \subset D$ the speaker should have claimed (3) instead of (2) (Quantity). The hearer assumes that the speaker didn't make any of those alternative claims to avoid saying something false (Quality). If (2) is true, and (3) is false for every $D' \subset D$, the FCC must be true.

2. *Algún* is not a FCI. The sentence in (4a) is deviant if the speaker knows in which room Juan is — in contrast, (4b) is fine. This requirement disappears in downward entailing environments ((5) does not convey that there is no variation among the relevant epistemic alternatives as to which room Juan is), and, so, it looks like a Quantity-based implicature. In fact, *algún* has been analyzed as a domain widener that, just like *irgendein*, is associated with a FCC [1]. We show, however, that the modal variation implicature associated with *algún* is weaker than free choice: the sentence in (4a) is appropriate in the context in (6), where it is false that for every room r in the house, it might be the case that Juan is in r .

3. An Anti-Singleton Indefinite. We start with the observation that *algún* cannot range over singleton sets: (7a) is deviant, (7b) is fine. Contra Alonso-Ovalle and Menéndez-Benito [1], we contend that *algún* is not a domain widener, but simply signals, via a lexical presupposition, that its domain is not a singleton (8). It seems then plausible to assume that the assertion made by a sentence like (4a) with respect to a domain D does not compete with *all* alternative stronger claims that would have resulted from using a subdomain of D , as in the K & S analysis of *irgendein*, but that it rather competes with all alternative claims that would have resulted from using any *singleton* subdomain of D . A K & S-style reasoning derives the inference that the speaker of (4a) does not know which room Juan is (without requiring him to be completely ignorant). Let D be {the kitchen, the bedroom, the bathroom, the living room}. The competing domains will now be {the kitchen}, {the bedroom}, {the bathroom}, {the living room}. Upon hearing (4a), the hearer will conclude for any of those rooms that the speaker is not convinced that Juan is there. This is compatible with the speaker being convinced that Juan is not in the bedroom or in the bathroom, as in (6).

4. Blocking. The possibility sentence in (12) is also appropriate in situations where not all rooms are possibilities. Yet modal variation cannot be derived as before: if (10) is true, (11) must be true for some singleton $D' \subset D$. In fact, via a K & S-style reasoning, the hearer could assume that the speaker used a D larger than a singleton to signal antiexhaustivity (that for any singleton $D', D'' \subset D$ if the claim is true with respect to D' , it must also be true with respect to D'') which would derive a FCC, contrary to fact. We contend that the reason for choosing *algún* cannot be to convey FC here, since, in this environment, the determiner *cualquiera* conveys FC truth-conditionally. The FC inference cannot be blocked this way in (4a), because *cualquiera* is ruled out in necessity sentences [6].

5. Conclusion. The picture that emerges from this investigation so far is that to understand how 'modal' indefinites differ we should compare both the operations that they perform on the domain of quantification

and their interactions with other determiners that can express truth-conditionally what they implicate.

- (1) Mary musste irgendeinen Arzt heiraten.
Mary had to *irgend-one* doctor marry
'Mary had to marry some doctor or other — any doctor was a permitted option. (Kratzer, 2005)
- (2) In every permitted world w , there is a doctor d in domain D such that Mary marries d in w .
- (3) In every permitted world w , there is a doctor d in domain D' such that Mary marries d in w .
- (4) a. Juan tiene que estar en alguna habitación de la casa.
Juan has to be in *ALGUNA* room of the house.
b. Juan tiene que estar en una habitación de la casa.
Juan has to be in *UNA* room of the house.
'Juan has to be in a room of the house.'
- (5) No es verdad que Juan tenga que estar en alguna habitación de la casa.
Not is true that Juan has to be in *ALGUNA* room of the house.
'It's not true that Juan has to be in a room of the house.'
- (6) Playing hide-and-seek. The speaker is sure that Juan is inside the house (and, not, in the garden or in the barn), but does not know where he is. The speaker is convinced that Juan is not in the bathroom or in the bedroom, but for all she knows, Juan could be in any of the other rooms.
- (7) a. La ganadora fue alguna chica que resultó ser la única hija del Marqués.
The winner was *ALGUNA* girl that happened to be the only daughter of the Marqués.
b. La ganadora fue una chica que resultó ser la única hija del Marqués.
The winner was *UNA* girl that happened to be the only daughter of the Marqués.
'The winner was a girl who happened to be the only daughter of the Marquis.'
- (8) $\llbracket \text{algún}_C \rrbracket^g = \lambda P_{\langle e,t \rangle} \lambda Q_{\langle e,t \rangle} : |\{x | g(C)(x) \ \& \ P(x)\}| > 1. \exists x [P(x) \ \& \ g(C)(x) \ \& \ Q(x)]$
- (9) a. Juan puede estar en alguna habitación de la casa.
Juan might be in *ALGUNA* room of the house.
b. Juan puede estar en una habitación de la casa.
Juan might be in *UNA* room of the house.
'Juan might be in a room of the house.'
- (10) There is at least one accessible world w and at least one room x in D such that Juan is in x in w .
- (11) There is at least one accessible world w and at least one room x in D' such that Juan is in x in w .
- (12) Juan puede estar en cualquier habitación de la casa.
Juan might be in any room of the house.

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On a non-canonical polarity sensitive *wh*-item in Czech

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1 Introduction

This paper has a predominantly empirical focus. In the first part, I present a set of data and arguments that show that *wh*-expressions in Czech modal existential *wh*-constructions (MEC) (see examples (1) and (2) below) are polarity sensitive in the broad sense (Giannakidou 1998), displaying a behavior of both free choice items (FCI) and negative polarity items (NPI). In the second part, I will show that some of the licensing requirements observed with *wh* in MEC are also present in some licensing contexts of a canonical Czech FCI *wh-koli(v)*. The aim of this paper is to show that the observations presented, often of cross-linguistic validity, are relevant for the study of polarity sensitivity in the broad sense.

The presentation is organized as follows. Section 2 discusses MEC. First, their general characteristics are introduced, followed by showing three of their intriguing properties: a fixed type of modality, negative polarity behavior of some types of *wh*, and a ban on complexity of the *wh*. Section 3 aims to show that some of the non-canonical licensing conditions associated with the *wh* in MEC (ban on complexity, specific word-order requirements, and necessity of overt existential predicates) replicate in a canonical Czech FCI *wh-koli(v)*. This, in turn, lends more support to the claim that *wh* in MEC are polarity sensitive. Section 4 summarizes the findings.

2 MEC and its *wh*

2.1 General characteristics¹

The term modal existential *wh*-construction has been introduced by Grosu (2004). It expresses three major properties of MEC (without actually implying a particular analysis, as e.g. the term irrealis/indefinite free relatives): (i) modality, (ii) existential quantification, and (iii) the presence of a *wh*-word.

Examples of Czech MEC are given below. They are introduced/selected either by the verb *mít* ‘have’ (further HAVE), as in the (a) examples, or *být* ‘be’ (further BE), as in the (b) examples. Unlike HAVE, which can express/agree with the subject, constructions with BE are impersonal (BE displays default third person agreement). The main verb of the MEC appears either (and primarily) in the form of infinitive, as in (1), or subjunctive, as in (2). In the latter case, the subjunctive morpheme *by-* obligatorily agrees with the subject of the matrix verb. The combination BE+subjunctive is not grammatical in Czech, perhaps because there is nothing for the subjunctive to agree with.²

- (1) a. mám/ nemám [s kým mluvit]
have.1sg not.have.1sg with who.instr talk.inf
‘There’s some/no one with whom I could talk’ (lit. ‘I (don’t) have with whom to talk’)
- b. je/ není [s kým mluvit]
is not.is with who.instr talk.inf
‘There’s some/no one with whom one could talk’ (lit. ‘There is(n’t) with whom to talk’)

¹ For a more detailed discussion of Czech MEC and their analysis, see Šimík (2008).

² The following abbreviations are used throughout the paper: inf = infinitive, subj = subjunctive, part = participle, imp = imperative, aux = verbal (tense) auxiliary, refl = reflexive, comp = complementizer; nom = nominative, acc = accusative, dat = dative, loc = locative, instr = instrumental; masc = masculine.

- (2) a. mám/ nemám [s kým bych mluvil]
 have/ not.have.1sg with who.instr subj.1sg talk.part
 ‘There’s no one with whom I could talk’ (lit. ‘I don’t have with whom to talk’)
- b. * je/ není [s kým bych mluvil]
 is/ not.is with who.instr subj.1sg talk.part
 ‘There’s no one with whom one could talk’ (lit. ‘There isn’t with whom to talk’)

MEC appear in most European languages (Slavic, Romance, Hungarian, Greek), as well as in some Semitic languages (Modern Hebrew, Classical Arabic); they are absent from Germanic languages, with the exception of Yiddish. I give a few examples for illustration (see Grosu 2004 for data from a variety of languages):

- (3) O João não tem [com quem brincar] *Portuguese* (Adriana Cardoso, p.c.)
 João not has with whom play.inf
 ‘João doesn’t have anyone to play with’
- (4) Nincs [ki-nek {írunk / írjunk}] *Hungarian* (Grosu 2004:408)
 not.is who-to {write.inf.1pl write.subj.1pl}
 ‘We have no one we can write to.’
- (5) Den eho [pion na stilo sto Parisi] *Greek* (Grosu 2004:407)
 not have.1sg whom subj send.1sg to.the Paris
 ‘I have no one I can send to Paris’

The cross-linguistic variation of MEC is highly limited. For example, the class of verbs that can select MEC is closed: it includes verbs like ‘be’, ‘have’, ‘look for’, ‘find’, ‘buy’, ‘send’, ‘choose’ and perhaps a few more. Grosu (2004) draws a generalization that MEC can only be selected by verbs that involve an existential component, i.e. verbs expressing existence or various modes of coming into existence. The second major point of a very limited variation is the mood of the main MEC verb: it can be infinite, subjunctive, and marginally present-tense indicative (in languages that lack subjunctive, like Serbo-Croatian).

2.2 Modality in MEC

Abstracting from the cross-linguistic variation, let us concentrate one of the defining characteristics of MEC: in all languages they express *modality of possibility or availability*. Why does a sentence of the form “You have with whom to speak” invariably (cross-linguistically) express the meaning ‘there is someone with whom you *can* speak’ rather than ‘there is someone with whom you *have to/should* speak’? This question is even more disturbing in light of the fact that headed infinitival relatives, as encountered e.g. in English, are typically ambiguous as for their modality (Bhatt 2001). Compare the following two sentences (a Czech minimal pair is unfortunately unavailable, since Czech has no headed infinitival relatives):

- (6) a. There is something to read here.
 ‘There is something that one could/should read’
- b. Je tady co číst.
 is here what read.inf
 ‘There is something that one could/*should read’

So what is responsible for the fixed modality in MEC? We know that free choice items in some languages, Czech and English among them, are sensitive to a certain type of modality. Consider the following contrast:

- (7) a. Mohl přinést jakoukoliv knížku.
could.past bring wh-FCI book
'He could bring / could have brought any book.'
- b. * Musel přinést jakoukoliv knížku.
must.past bring wh-FCI book
* 'He was supposed to bring / must have brought any book.'

The modals in (7a), expressing permission or epistemic possibility, but not the modals in (7b), expressing obligation or epistemic necessity, license free choice items. As indicated, this holds for both Czech and English. Plausibly, this difference can be accounted for in terms of some variation requirement imposed on the variable introduced by the FCI:

- (8) *Variation requirement* (à la Giannakidou 2001)
A variable introduced by an FCI need to be assigned a different value in every world that we consider.

If the FCIs in (7) are universal quantifiers (contra Giannakidou 2001, but with Dayal 2004), the pattern is accounted for by the variation requirement: in the former case, the variable introduced by *any book* is assigned a different value in every world of consideration; in the latter case, all the values of *any book* are present in every world of consideration.

- (9) a. $\forall x[\mathbf{book}(x) \rightarrow \exists w.\mathbf{bring}(he,x,w)]$
For every book x there is a possible world w such that he brings x in w .
- b. $\forall x[\mathbf{book}(x) \rightarrow \mathbf{bring}(he,x,\forall w)]$
For every book x he brings x in every world w of consideration.

Coming back to the modality in MEC, it is possible that the necessity/obligation modality (which should in principle be present there, as in headed infinitival relatives) is eliminated by the same requirement on variation. The following representations are the real and the unattested interpretation of (6b), respectively.

- (10) a. $\exists x.\mathbf{thing}(x) \wedge \mathbf{read}(x,w)$
There is some x such that one reads x in w .
- b. * $\exists x.\mathbf{thing}(x) \wedge \mathbf{read}(x,\forall w)$
There is some x such that one reads x in every world w of consideration.

In (10b), one and the same value of x validates the claim in every world of consideration, in apparent violation of (8). The variation requirement is vacuously satisfied in (10a), since there is only one world of consideration.³

Though not without problems and unclarities, the assumption that *wh*-expressions in MECs introduce an FCI-like, and therefore modality-sensitive variable, explains the robust cross-linguistic fact of possibility modality in MEC. The upcoming sections give more direct and indirect evidence that *wh* in MEC are polarity sensitive indefinites in the broad sense.

³ This is a departure from Giannakidou's original proposal in that there is no presupposition requiring more than one world of consideration. (8) can thus be satisfied by reference to a single world, which, supposedly, must not be the actual one (this is taken care of the nonveridicality requirement).

2.3 NPIs

Some of the *wh* in MEC are NPIs, namely *kdy* ‘when’, *jak* ‘how’, and *kdo/co* ‘who/what’ in nominative. Observe the following examples:

- (11) a. * Má tady **kdy/jak/kdo** uklidit *affirmative*
 have.3sg here when/how/who clean up
 ‘There is time/a way/someone to clean here up’
 b. Nemá tady **kdy/jak/kdo** uklidit *negative*
 not.have.3sg here when/how/who clean up
 ‘There is no time/way/one to clean here up’
 c. **Pokud** tady má **kdy/jak/kdo** uklidit, tak je to v pohodě *protasis of*
 if here have.3sg when/how/who clean up then is it cool *conditional*
 ‘If you have time/a way/anyone to clean here up, it’s all right’

The following corpus findings enforce my intuition:

- (12) **Table** NPI behavior of *wh* in MEC: an auxiliary corpus research⁴

	positive contexts	negative contexts	out of positive were weak NPI contexts (<i>if</i> -clause, <i>glad that...</i>)	out of positive was coordination (<i>when and where</i>)
<i>co</i> ‘what’ (acc, gen, dat)	67% (60/90)	67% (60/90)		
<i>kdo</i> ‘who’ (acc, gen, dat)	48% (29/60)	65 % (39/60)		
<i>kdo</i> ‘who’ (nom)	5% (5/100)	38% (19/50)	80% (4/5)	
<i>jak</i> ‘how’	0% (0/100)	60% (18/30)		
<i>kdy</i> ‘when’	5% (5/100)	53% (16/30)	60% (3/5)	40% (2/5)
<i>proč</i> ‘why’	47% (14/30)	30% (9/30)		

Even though this fact clearly proves that at least some *wh* in MEC are polarity sensitive (in the narrow sense, i.e. to a downward entailing operator), it is far from clear how this particular distribution of polarity phenomena should be accounted for. There is one more problem. If I am correct in claiming that all *wh* in MEC are polarity sensitive in the broad sense (sensitive to a certain modality), where does the *additional* sensitivity come from? I leave these questions open for now. Let me just note that section 3.1 presents data which also point in the direction of double licensing—this time with true FCIs.

2.4 Complexity

Another intriguing fact about *wh*-expressions in MEC is that they cannot be complex (i.e. they do not allow for an (overt) NP-restriction). This is a cross-linguistically robust observation—the same has been

⁴ I searched for collocations (neg)HAVE.present.any person + the relevant *wh*. The numbers show the frequency of MEC appearance in a certain number of Google-ordered hits (e.g. out of the first 100 Google hits for the query HAVE+*kdo*, 5 were MEC). Other (non-MEC) hits usually included multiple *wh*-questions (*Co má kdo půjčeno?* ‘Who has borrowed what?’). Note that the search didn’t include *co* ‘what’ in nominative. The reason is that they are too hard to find, which is caused by the homophony of ‘what’ in nominative and accusative in Czech. The accusatives simply override the nominatives.

reported for Bulgarian (Rudin 1986), Romanian and Hebrew (Grosu 2004), Hungarian (Veronika Hegedus, p.c.), and Russian (Aysa Arylova and Zhenya Markovskaya, p.c.).

- (13) Mám si s {kým/*jakým studentem/*kterým studentem} promluvit.
 have.1sg refl with {whom/what student/which student}.inst talk.inf
 ‘There is someone/a student that I can talk to’

An analogous fact was observed by Cheng (1991) for Mandarin Chinese polarity sensitive *wh*-indefinites, as illustrated below. Since then, this fact has remained largely ignored in the literature on Chinese *wh*-indefinites (Li 1992, Lin 1996).

- (14) Hufei hui mai sheme/* na-yi-ben-shu ma (Cheng 1991:114)
 Hufei will buy what which-one-cl-book Q_{yes-no}
 ‘Will Hufei buy anything/any book?’

Note that the same is true of *wh*-indefinites in German (which, however, are exceptional by not being polarity sensitive):

- (15) Gestern habe ich wieder was / *welche Bücher gekauft
 yesterday have I again what which books bought
 ‘Yesterday I bought something/some books again’

At the present state of our knowledge, one could only speculate about the explanation of this cross-linguistic phenomenon. Prima facie, it is not easy to account for a complexity restriction in semantic terms, since complex (non-specific) NPs are usually analyzed on a par with simple ones. However, complexity restrictions have been observed to play a role in various domains of syntax, see e.g. Van Craenenbroeck (2004:45–47) for discussion and a proposal in terms of structural height. Once again, a similar ban on complexity is observed for a Czech FCI (section 3.2).

3 Czech canonical FCI

In this section, I will point out some peculiar distribution facts of the Czech “canonical” FCI, which will lend some further indirect support for viewing the *wh* in MEC as a sort of polarity sensitive item.

Czech expresses the “canonical” FCI by adding the morpheme *-koli(v)* to *wh*-words.⁵ Its distribution slightly differs from both Greek *wh-dhipote* (Giannakidou 2001) and French *n’importe quel* and *tout* (Jayez and Tovenà 2005). The following examples illustrate that the Czech FCI is licensed in the contexts of permission modality, genericity, and comparatives:

- (16) K narozeninám si můžeš vybrat jakoukoliv knihu.
 to birthday refl can.2sg choose.inf what(kind)-FCI book
 ‘For your birthday you can choose any book.’
- (17) Kterýkoliv doktor ti řekne, že se máš jít léčit.
 which-FCI doctor you tell that refl have.2sg go.inf heal.inf
 ‘Any doctor will tell you that you should go for a treatment.’
- (18) Pavla je chytřejší, než kterákoliv její spolužačka.
 Pavla is smarter than which-FCI her classmate
 ‘Pavla is smarter than any of her classmates.’

⁵ As far as I am concerned, the morphemes *-koli* and *-koliv* are in a completely free variation. I will use the latter here.

The Czech FCI is also licensed in other contexts, namely in conditionals and restrictions of universals, like the Greek *wh-dhipote* and French *n'importe quel*. Unlike Greek or French FCIs, it is also licensed in *before-*, *without-*, and *too-*clauses. In both cases, however, more is required than just the appropriate context itself.

3.1 Existential predicates

Let us start with the observation in (19) and (20). Under default conditions, the protasis of conditionals and the restriction of universals do not license *wh-koliv*. It is either ungrammatical (if scrambled) or has the indiscriminative ‘just any’ reading (if in situ). # marks an unintended meaning. The (b) examples differ from (a) only in the verb-FCI order (and in interpretation).⁶

- (19) a. * *Pokud se s kýmkoliv vyspíš, tak tě zabiju.*
 if refl with who-FCI sleep.2sg so you kill.1sg
 ‘If you sleep with anybody, I’ll kill you.’
 b. # *Pokud se vyspíš s kýmkoliv, tak tě zabiju.*
 ‘If you sleep with just anybody, I’ll kill you.’
- (20) a. * *Všichni, kdo se s kýmkoliv vyspí, získají nepopsatelnou zkušenost.*
 all who refl with who-FCI sleep.3pl gain.3pl indescribable experience
 ‘Everyone who sleeps with anyone, gains indescribable experience.’
 b. # *Všichni, kdo se vyspí s kýmkoliv, získají nepopsatelnou zkušenost.*
 ‘Everyone who sleeps with just anyone, gains indescribable experience.’

The examples below show that the ungrammaticality is lost when the FCI is an argument of a verb with an existential component, as object of ‘have’ or subject of ‘appear/come into existence’:⁷

- (21) a. *Pokud máte jakékoliv otázky, ptejte se prosím teď.*
 if have.2pl what(kind)-FCI questions ask.imp.2pl refl please now
 ‘If you have any questions, please ask now.’
 b. *Pokud se vyskytnou jakékoliv problémy, půjdeme domů.*
 if refl appear.3pl what(kind)-FCI problems go.3pl home
 ‘If any problems appear, we’ll go home.’

The following examples show that double licensing (conditional + existential predicate) is indeed necessary:

- (22) a. * *Máme jakékoliv otázky, můžeme se ptát?*
 have.1pl what-FCI questions can.1pl refl ask.inf
 ‘We have some questions, can we ask?’
 b. * *Vyskytly se jakékoliv problémy, musíme jít domů.*
 appear.part.3pl refl what-FCI problems must.1pl go.inf home
 ‘Some problems appeared, we have to go home.’

⁶ All ungrammatical examples in this section can be improved by replacing the FCI by a *ně-wh* expression (*někdo* ‘someone’, *nějaký* ‘some’, etc.), an indefinite with a fairly broad distribution, ranging from weakly specific indefinites to weak NPIs.

⁷ Examples with restrictions of universals are omitted. The judgments are the same as in the case of conditionals.

Thus, there is an interesting similarity between FCI in conditionals and restrictions of universals and the *wh*-words in MEC: both classes of expressions are in need of licensing by an overt existential predicate.⁸

3.2 Complexity and word order

In section 2.4, we saw that there are constraints on the complexity of *wh*-expressions in MEC: the presence of an NP restriction results in ungrammaticality. The following examples show a similar state of affairs for the Czech FCI *wh-koliv*: *before*-, *without*-, and *too*-clauses appear to license only simple *wh*-expressions (note that word order also plays a role). As in the examples above, (b) differs from (a) only in the verb-FCI order.

- (23) a. Odmítl tu žádost, aniž by si z ní cokoliv/ *jakoukoliv pasáž přečetl.
 refused that request without subj refl from it what-FCI/what(kind)-FCI part read
 b. Odmítl tu žádost, aniž by si z ní přečetl *cokoliv/??jakoukoliv pasáž.
 ‘He refused the request without reading anything/any part of it.’
- (24) a. Rozhodl se předtím, než se s kýmkoliv/*kterýmkoliv kolegou poradil
 decided refl before comp refl with who-FCI/ which-FCI colleague consult
 b. Rozhodl se předtím, než se poradil *s kýmkoliv/??kterýmkoliv kolegou
 ‘He decided before he consulted anyone/any colleague.’
- (25) a. Je příliš tvrdohlavá, aby si od kohokoliv/?? kteréhokoliv kamaráda nechala pomoci
 is too stubborn comp refl from anyone/ any friend let help
 ‘She is too stubborn to let anyone/any friend help her.’
 b. Je příliš tvrdohlavá na to, aby si nechala pomoci od #kohokoliv/#kteréhokoliv kamaráda
 ‘She is too stubborn to let just anyone/just any friend help her.’

The examples above show two things: the FCI in the given contexts is licensed only when (i) it is simple and (ii) it is preverbal. Complex FCI in preverbal positions are ungrammatical or close to unacceptable; simple FCI in postverbal positions are ungrammatical; complex FCI are unacceptable and the meaning, if any, is closer to indiscriminative FCIs. The indiscriminative meaning is fully grammatical in postverbal FCIs in a *too*-clause.

These data once again point out a similarity between FCI and *wh* in MEC. We observe a dependency on complexity, as well as on word order. The relevant MEC data are given/repeated below:

- (26) a. Mám s kým mluvit
 have.1sg with who talk.inf
 b. * Mám mluvit s kým
 have.1sg talk.inf with who
 ‘There is someone for me to talk with’
- (27) Mám si s {kým/*jakým studentem/*kterým studentem} promluvit.
 have.1sg refl with {whom/what student/which student}.inst talk.inf
 ‘There is someone/a student that I can talk to’

4 Summary

I presented a hypothesis that *wh*-expressions in MEC are polarity sensitive in the sense of Giannakidou (1998). Some even display sensitivity to downward entailing operators, i.e. are NPIs. So far unknown

⁸ Interestingly, the French data in Jayez and Tovená (2005:8) potentially point in the same direction.

restrictions on complexity, word-order, and requirements for overt existential predication were observed with the Czech FCI *wh-koliv*. Analogous restrictions also hold for *wh* in MEC. Another important finding is that in some contexts Czech FCI (and presumably *wh* in MEC) are subject to double licensing conditions. Two cases were observed: (i) some *wh* in MEC require licensing by downward entailing operators in addition to the licensing by modality (by assumption); (ii) protases of conditionals and restrictions of universals licence FCIs only if they are arguments of an existential predicate.

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