Epistemic Indefinites Cross-Linguistically

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Outline

- The variety of epistemic indefinites: *irgendein* and *un qualche*
- Previous analyses: the pragmatic stance
- Proposal: Dynamics with Conceptual Covers (CC)
- Conclusions

Epistemic indefinites

- Use of plain indefinites can give rise to an ignorance effect:

  (1) Somebody arrived late. (Guess who?/Namely Mary)
     a. Conventional meaning: Somebody arrived late
     b. Ignorance implicature: The speaker doesn't know who

- **Epistemic indefinites**: ignorance effect conventionalized

  (2) German *irgend-*   [Haspelmath 1997, Kratzer & Shimoyama 2002]
     a. **Irgendjemand** hat angerufen. #Rat mal wer?
        somebody   has called   guess prt who?
     b. Conventional meaning: Somebody called – the speaker doesn't not know who

  (3) Italian *un qualche*   [Zamparelli 2007]
     a. Mario ha sposato **una qualche** ragazza, #cioè Maria.
        Mario has married a   some   girl   namely Maria
     b. Conventional meaning: Mario has married some girl – the speaker doesn't know who

Four functions for epistemic indefinites

- At least four functions (context/meaning) for epistemic indefinites:
  - **spMV**: ignorance (MV) effect in specific uses
  - **epiMV**: ignorance (MV) effect under epistemic modals
  - **NPI**: narrow scope existential meaning in negative contexts
  - **deoFC**: free choice effect under deontic modals
- Function: useful notion for crosslinguistic research (Haspelmath 97)
- In order for an indefinite to qualify for a function, it must
  - be grammatical in the context the function specifies. E.g. no **spMV** for *any*:

    (4) #Mary married *any* doctor.   [#spMV]

  - have the meaning that the function specifies. E.g. no **deoFC** for *some*:

    (5) You may marry *some* doctor.   [#deoFC]
       ($\not\Rightarrow$ any doctor is a permissible option)

Modal Variation effect in specific uses (spMV)

- Ignorance effect in episodic sentences:

  (6) Irgendein Student hat angerufen, (#nämlich Peter).
     Some   student has called   (#namely Peter)
     'Some student called, I don't know who'

  (7) Maria ha sposato un qualche professore, (#cioè   Vito).
     Maria has married a   some   professor (#namely Vito)
     'Maria married some professor, I don't know who'

- Modal Variation (MV) effect or Free Choice (FC)?

  (8) a. MV: I don't know who $\mapsto \neg\exists x\Box\phi$
     b. FC: It might be anyone $\mapsto \forall x\Diamond\phi$

- Modal Variation (MV) rather than Free Choice (FC):

  (9) Hide-and-seek situation [O&M 2010]: we don't know where John is, but we know that he is not in the bedroom or in the bathroom
     a. John is in some room of the house.
     b. John is in irgendein/un qualche room of the house.
     c. #He might be anywhere.

Modal Variation under epistemic modals (epiMV)

- Ignorance effect under epistemic modals:

  (10) Maria muss irgendeinen Dokter geheiratet haben.
      Maria must some   doctor married   have
      'Maria must have married some doctor, I don't know who'

  (11) Maria deve aver sposato un qualche professore.
      Maria must have married a   some   professor
      'Maria must have married some professor, I don't know who'

- Modal variation effect rather than free choice:

  (12) Hide-and-seek situation [O&M 2010]:
      a. John must be in some room of the house.
      b. John must be in irgendein/un qualche room of the house.
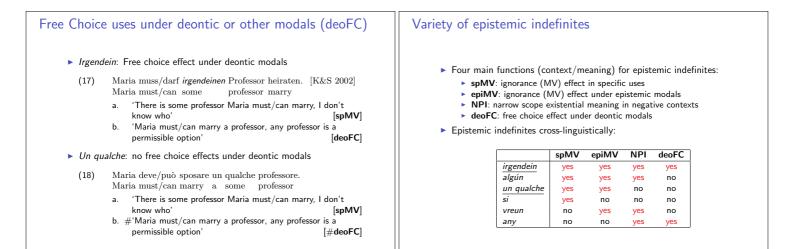   c. #He might be anywhere.

Agent-oriented epistemic effects (epiMV)

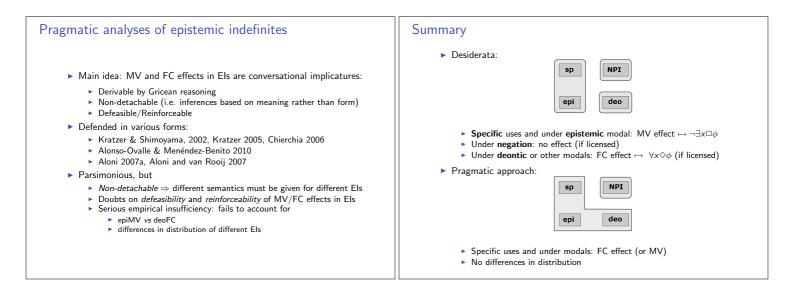- ▶ Agent-oriented epistemic effects under propositional attitude verbs:

  (13) Andy glaubt, dass Maria irgendeinen Dokter geheiratet hat.
        Andy believes that Maria some   doctor married   had
     a. 'Andy believes that Maria married some doctor, I don't
        know who'   [**spMV**]
     b. 'Andy believes that Maria married some doctor, *Andy*
        doesn't know who'   [agent-oriented **epiMV**]

  (14) Antonio crede   che Maria abbia sposato un qualche
        Antonio believes that Maria has$_{subj}$ married a   some
        professore.
        professor
     a. 'Antonio believes that Maria married some professor, I don't
        know who'   [**spMV**]
     b. 'Antonio believes that Maria married some professor,
        Antonio doesn't know who'   [agent-oriented **epiMV**]

Negative polarity uses (NPI)

- ▶ *Irgendein*: narrow scope existential meaning in negative contexts

  (15) Niemand hat irgendeine Frage   beantwortet.   [**NPI**]
        Nobody has some   question answered
        'Nobody answered any question'

- ▶ *Un qualche*: deviant in negative contexts

  (16) ??Nessuno ha risposto a una qualche domanda.   [#**NPI**]
        Nobody has answered to a   some   question
        #'Nobody answered any question'

Free Choice uses under deontic or other modals (deoFC)

- ▶ *Irgendein*: Free choice effect under deontic modals

  (17) Maria muss/darf *irgendeinen* Professor heiraten. [K&S 2002]
        Maria must/can some   professor marry
     a. 'There is some professor Maria must/can marry, I don't
        know who'   [**spMV**]
     b. 'Maria must/can marry a professor, any professor is a
        permissible option'   [**deoFC**]

- ▶ *Un qualche*: no free choice effects under deontic modals

  (18) Maria deve/può sposare un qualche professore.
        Maria must/can marry a some   professor
     a. 'There is some professor Maria must/can marry, I don't
        know who'   [**spMV**]
     b. #'Maria must/can marry a professor, any professor is a
        permissible option'   [#**deoFC**]

Variety of epistemic indefinites

- ▶ Four main functions (context/meaning) for epistemic indefinites:
  - ▶ **spMV**: ignorance (MV) effect in specific uses
  - ▶ **epiMV**: ignorance (MV) effect under epistemic modals
  - ▶ **NPI**: narrow scope existential meaning in negative contexts
  - ▶ **deoFC**: free choice effect under deontic modals
- ▶ Epistemic indefinites cross-linguistically:

	spMV	epiMV	NPI	deoFC
irgendein	yes	yes	yes	yes
algún	yes	yes	yes	no
un qualche	yes	yes	no	no
si	yes	no	no	no
vreun	no	yes	yes	no
any	no	no	yes	yes

Pragmatic analyses of epistemic indefinites

- ▶ Main idea: MV and FC effects in EIs are conversational implicatures:
  - ▶ Derivable by Gricean reasoning
  - ▶ Non-detachable (i.e. inferences based on meaning rather than form)
  - ▶ Defeasible/Reinforceable
- ▶ Defended in various forms:
  - ▶ Kratzer & Shimoyama, 2002, Kratzer 2005, Chierchia 2006
  - ▶ Alonso-Ovalle & Menéndez-Benito 2010
  - ▶ Aloni 2007a, Aloni and van Rooij 2007
- ▶ Parsimonious, but
  - ▶ *Non-detachable* ⇒ different semantics must be given for different EIs
  - ▶ Doubts on *defeasibility* and *reinforceability* of MV/FC effects in EIs
  - ▶ Serious empirical insufficiency: fails to account for
    - ▶ epiMV *vs* deoFC
    - ▶ differences in distribution of different EIs

Summary

- ▶ Desiderata:

  - ▶ **Specific** uses and under **epistemic** modal: MV effect ↦ ¬∃x□φ
  - ▶ Under **negation**: no effect (if licensed)
  - ▶ Under **deontic** or other modals: FC effect ↦ ∀x◇φ (if licensed)
- ▶ Pragmatic approach:

  - ▶ Specific uses and under modals: FC effect (or MV)
  - ▶ No differences in distribution

An alternative analysis for epistemic indefinites

- Epistemic indefinites $\mapsto$ existentials with two characteristics:
  [cf. Kadmon & Landman 1993]
  1. **Domain Shift**: induce an obligatory domain shift
  2. **Felicity Condition**: express conditions on the input context that must be satisfied for the indefinite to be felicitous
- Modal Variation effect as result of lexically encoded felicity condition rather than Gricean reasoning (cf. dynamics of presupposition)
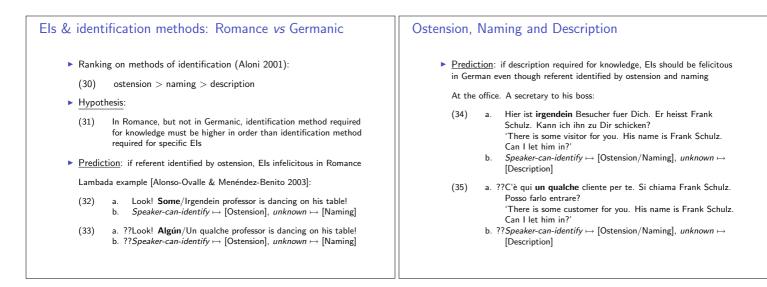 $\Rightarrow$ *??defeasible, ??reinforceable*
- MV as fossilized implicature: inference, pragmatic in origin, now part of lexically encoded meaning $\Rightarrow$ *derivable by Gricean means*
- Difference between different indefinites in terms of different domain shifts they can induce $\Rightarrow$ *variety of EIs*

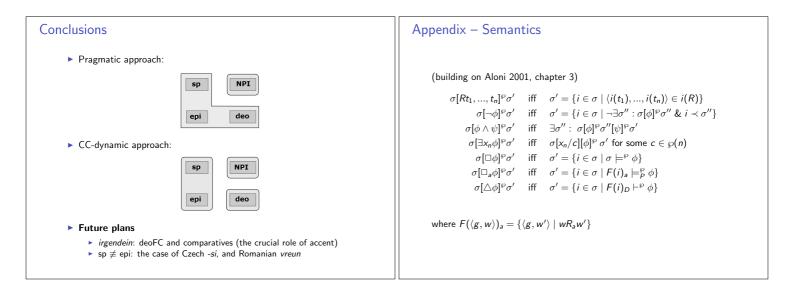## Domain shift triggered by epistemic indefinites

- Epistemic indefinites block context induced domain selections
  [cf. Zamparelli 2007]
- Two ways in which context determine quantificational domains:
  - Contextual domain restriction (Westerståhl 1984):

    (19)   Everybody passed the exam.   [e.g. everybody in my class]

    Blocking $\mapsto$ **domain widening** (DW)
  - Pragmatic selection of a method of identification (Aloni 2001):

    (20)   **The card scenario:** Two face-down cards, the ace of hearts and the ace of spades. You know that the winning card is the ace of hearts, but you don't know whether it's the card on the left or the one on the right.

    (21)   You know which card is the winning card.   [True or False?]

    Blocking $\mapsto$ Shift of identification method or **conceptual cover shift** (CC-shift)

Conceptual Covers

- Identification methods can be formalized as *conceptual covers*:

  (22)   A conceptual cover *CC* is a set of concepts such that in each world, every individual instantiates exactly one concept in *CC*.

- In the cards scenario, there are three salient covers/ways of identifying the cards:

  (23)   a.   {on-the-left, on-the-right}   [ostension]
         b.   {ace-of-spades, ace-of-hearts}   [naming]
         c.   {the-winning-card, the-losing-card}   [description]
         d.   #{on-the-left, ace-of-spades}

- Evaluation of (24) depends on which of these covers is adopted:

  (24)   You know which$_n$ card is the winning card.
         a.   False, if $n \mapsto$ {on-the-left, on-the-right}
         b.   True, if $n \mapsto$ {ace-of-spades, ace-of-hearts}
         c.   Trivial, if $n \mapsto$ {the-winning-card, the-losing-card}

  $\mapsto$ CC-indices n added to logical form, their value is contextually supplied

Epistemic indefinites & identification methods

- Puzzle of specific unknown uses:

  (25)   Devo   incontrare un qualche professore.
         I-must meet   a some   professor
         'I must meet a certain professor, but I don't know who he is'

  - Specific: speaker has someone in mind $\Rightarrow$ speaker can identify
  - But unknown: speaker doesn't know who $\Rightarrow$ speaker cannot identify
- Different identification methods are at play:
  - Speaker can identify on one method (e.g. description)   (specific)
  - But not on another (e.g. naming)   (unknown)
- MAIN INTUITION: referents of EIs typically identified via a method different from the one required for knowledge $\mapsto$ **CC-shift**
  - Suppose m is the cover required for knowledge
  - EIs signal obligatory shift to a cover n different from $m \mapsto$ introduce discourse referents elements of $n \neq m$ [CC-shift]
  - If CC-shift is not trivial, use of EI implies speaker doesn't know who

Naming and Ostension

At a workshop:

(26)   a.   Ich muss **irgendeinen** Professor hier treffen. Er heisst Gennaro Chierchia, aber ich weiss nicht wie er aussieht.
            'I have to meet some professor. His name is Gennaro Chierchia, but I don't know what he looks like'
       b.   *Speaker-can-identify* $\mapsto$ [Naming], *unknown* $\mapsto$ [Ostension]

(27)   a.   Devo incontrare **un qualche** professore. Si chiama Gennaro Chierchia, ma non so che aspetto abbia.
            'I have to meet some professor. His name is Gennaro Chierchia, but I don't know what he looks like'
       b.   *Speaker-can-identify* $\mapsto$ [Naming], *unknown* $\mapsto$ [Ostension]

Ostension and Naming

At a soccer match:

(28)   a.   Guck mal! Da ist **irgendein** Fussballspieler verletzt. Weisst Du wer das ist?
            'Look! Some player got injured. Do you know who he is?'
       b.   *Speaker-can-identify* $\mapsto$ [Ostension], *unknown* $\mapsto$ [Naming]

(29)   a. ??Guarda! **Un qualche** giocatore si è fatto male. Sai chi è?
            'Look! Some player got injured. Do you know who he is?'
       b. ??*Speaker-can-identify* $\mapsto$ [Ostension], *unknown* $\mapsto$ [Naming]

EIs & identification methods: Romance *vs* Germanic

▶ Ranking on methods of identification (Aloni 2001):

   (30)   ostension > naming > description

▶ Hypothesis:

   (31)   In Romance, but not in Germanic, identification method required for knowledge must be higher in order than identification method required for specific EIs

▶ Prediction: if referent identified by ostension, EIs infelicitous in Romance

Lambada example [Alonso-Ovalle & Menéndez-Benito 2003]:

   (32) a. Look! **Some**/Irgendein professor is dancing on his table!
          b. *Speaker-can-identify* ↦ [Ostension], *unknown* ↦ [Naming]

   (33) a. ??Look! **Algún**/Un qualche professor is dancing on his table!
          b. ??*Speaker-can-identify* ↦ [Ostension], *unknown* ↦ [Naming]

Ostension, Naming and Description

▶ Prediction: if description required for knowledge, EIs should be felicitous in German even though referent identified by ostension and naming

At the office. A secretary to his boss:

   (34) a. Hier ist **irgendein** Besucher fuer Dich. Er heisst Frank Schulz. Kann ich ihn zu Dir schicken?
            'There is some visitor for you. His name is Frank Schulz. Can I let him in?'
          b. *Speaker-can-identify* ↦ [Ostension/Naming], *unknown* ↦ [Description]

   (35) a. ??C'è qui **un qualche** cliente per te. Si chiama Frank Schulz. Posso farlo entrare?
            'There is some customer for you. His name is Frank Schulz. Can I let him in?'
          b. ??*Speaker-can-identify* ↦ [Ostension/Naming], *unknown* ↦ [Description]

Proposal

▶ Epistemic indefinites: existentials with two characteristics:

  1. Induce obligatory domain-shift $(D \to D')$:
     ▶ *un qualche*: CC-shift
     ▶ *irgendein*: CC-shift + DW
  2. Are felicitous in context σ iff domain-shift is for a reason:

    (i) CC-shift ↦ NECESSARY WEAKENING

      (36) $\sigma \models \ldots \exists x_{D'} \ldots$, but $\sigma \not\models \ldots \exists x_D \ldots$ [Quality]

      CC-shift justified only if otherwise speaker's information state would not support the statement

    (ii) DW ↦ STRENGTHENING

      (37) $\ldots \exists x_{D'} \ldots \models \ldots \exists x_D \ldots$ [Quantity]

      DW justified only if it creates a stronger statement

▶ Implementation in Dynamic Semantics with Conceptual Covers
                        (Aloni 2001, chapter 3)

Predictions

	spMV	epiMV	NPI	deoFC
un qualche (only CC-shift)	yes	yes	no	no
irgendein (CC-shift + DW)	yes	yes	yes	no [problem!]

▶ **spMV** ≡ **epiMV**: via CC-shift + NECESSARY WEAKENING

▶ #**NPI** & #**deoFC** for *un qualche*: CC-shift vacuous under negation or deontic modals

▶ **epi** ≢ **deo**: via dynamic analysis of epistemic modality (Veltman 1997)

▶ **NPI** for *irgendein*: via DW + STRENGTHENING

▶ **deoFC** for *irgendein*: several possible solutions that need further investigation [see appendix]

Conclusions

▶ Pragmatic approach:

▶ CC-dynamic approach:

▶ **Future plans**
  ▶ *irgendein*: deoFC and comparatives (the crucial role of accent)
  ▶ sp ≢ epi: the case of Czech *-si*, and Romanian *vreun*

Appendix – Semantics

(building on Aloni 2001, chapter 3)

$$\sigma[Rt_1, \ldots, t_n]^{\wp}\sigma' \quad \text{iff} \quad \sigma' = \{i \in \sigma \mid \langle i(t_1), \ldots, i(t_n)\rangle \in i(R)\}$$
$$\sigma[\neg\phi]^{\wp}\sigma' \quad \text{iff} \quad \sigma' = \{i \in \sigma \mid \neg\exists\sigma'' : \sigma[\phi]^{\wp}\sigma'' \,\&\, i \prec \sigma''\}$$
$$\sigma[\phi \wedge \psi]^{\wp}\sigma' \quad \text{iff} \quad \exists\sigma'' : \sigma[\phi]^{\wp}\sigma''[\psi]^{\wp}\sigma'$$
$$\sigma[\exists x_n\phi]^{\wp}\sigma' \quad \text{iff} \quad \sigma[x_n/c][\phi]^{\wp}\sigma' \text{ for some } c \in \wp(n)$$
$$\sigma[\Box\phi]^{\wp}\sigma' \quad \text{iff} \quad \sigma' = \{i \in \sigma \mid \sigma \models^{\wp} \phi\}$$
$$\sigma[\Box_a\phi]^{\wp}\sigma' \quad \text{iff} \quad \sigma' = \{i \in \sigma \mid F(i)_a \models^{\wp}_P \phi\}$$
$$\sigma[\triangle\phi]^{\wp}\sigma' \quad \text{iff} \quad \sigma' = \{i \in \sigma \mid F(i)_D \vdash^{\wp} \phi\}$$

where $F(\langle g, w\rangle)_a = \{\langle g, w'\rangle \mid wR_a w'\}$

Logical notions

Support:

$$\sigma \models^\wp \phi \quad \text{iff} \quad \exists \sigma' : \sigma[\phi]^\wp \sigma' \ \& \ \forall i \in \sigma : i \prec \sigma'$$

$$\sigma \models_P^\wp \phi \quad \text{iff} \quad \sigma \models^\wp \phi \ \& \ \phi \text{ felicitous in } \sigma$$

Truth:

$$\sigma \vdash^\wp \phi \quad \text{iff} \quad \forall i \in \sigma : \exists \sigma' : \sigma[\phi]^\wp \sigma' \ \& \ i \prec \sigma'$$

Entailment:

$$\phi \models \psi \quad \text{iff} \quad \forall \sigma, \wp : \sigma \models^\wp \phi \Rightarrow \sigma \models^\wp \psi$$

$$\phi \models_P \psi \quad \text{iff} \quad \forall \sigma, \wp : \phi \ \& \ \psi \text{ felicitous in } \sigma : \sigma \models^\wp \phi \Rightarrow \sigma \models^\wp \psi$$

Epistemic Indefinites in Dynamic Semantics with CC

- ▶ Specific uses of indefinites introduce discourse referents
- ▶ In dynamic semantics with CC, discourse referents are elements of a pragmatically determined conceptual cover

rigid cover (rc)   non-rigid cover (nr)

Simplifying:

- ▶ Assume knowing who requires rigid identification
- ▶ Epistemic indefinites signal obligatory shift to a non-rigid cover (CC-shift) ↦ introduce non-rigid discourse referents
- ▶ If CC-shift is not trivial, use of indefinite entails not knowing who

Support *versus* truth

- ▶ **Support**: $\sigma \models \phi \quad$ iff $\quad \exists \sigma' : \sigma[\phi]\sigma' \ \& \ \forall i \in \sigma : i \prec \sigma'$
- ▶ **Truth**: $\sigma \vdash \phi \quad$ iff $\quad \forall i \in \sigma : \exists \sigma' : \sigma[\phi]\sigma' \ \& \ i \prec \sigma'$
- ▶ Support stronger than truth, e.g. $\sigma \vdash \exists x_{rc}\phi$, but $\sigma \not\models \exists x_{rc}\phi$

$\sigma = \{w_1, w_2\}$

- ▶ Only support is a CC-sensitive notion, e.g. $\sigma \not\models \exists x_{rc}\phi$, but $\sigma \models \exists x_{nc}\phi$
- ▶ NECESSARY WEAKENING and *epistemic modal* $\square$ defined in terms of support
- ▶ Other modals (notably *deontic* $\triangle$) defined in terms of truth

Un qualche (only CC): spMV

- ▶ Assume knowledge requires cover m:

(38) a. Speaker does not know who Maria married.
      b. $\neg \exists y_m \square \phi(y_m)$

- ▶ *Un qualche*-indefinites induce shift to n different from m (CC-shift):

(39) a. Maria married un qualche professor.
      b. $\underline{\exists x_n} \phi(x_n)$ $n \neq m$

- ▶ Whenever CC-shift is for a reason, we predict an ignorance effect
- ▶ Technically: modal variation as *pragmatic entailment*

(40) a. Maria married un qualche professor $\Rightarrow$ S does not know who
      b. $\underline{\exists x_n} \phi(x_n) \models_P \neg \exists y_m \square \phi(y_m)$
      c. $\phi \models_P \psi$ iff $\forall \sigma: \phi, \psi$ felicitous in σ & $\sigma \models \phi \Rightarrow \sigma \models \psi$

Un qualche (only CC): epiMV

- ▶ epiMV speaker-oriented:

(41) a. Maria deve aver sposato un qualche professore.
      b. Maria must have married some professor $\Rightarrow$ *Speaker* doesn't know who
      c. $\square \underline{\exists x_n} \phi(x_n) \models_P \neg \exists y_m \square \phi(y_m)$
      d. $\sigma[\square \phi]\{i \in \sigma \mid \sigma \models \phi\}$ [Veltman 1997]

- ▶ epiMV agent-oriented:

(42) a. Antonio crede che Maria abbia sposato un qualche professore.
      b. Antonio believes that Maria married some professor $\Rightarrow$ *Antonio* doesn't know who
      c. $\square_a \underline{\exists x_n} \phi(x_n) \models_P \neg \exists y_m \square_a \phi(y_m)$
      d. $\sigma[\square_a \phi]\{i \in \sigma \mid F(i)_a \models_P \phi\}$

Un qualche (only CC): #NPI & #deoFC

- ▶ CC-shifts are trivial in negative and deontic contexts:

(43) a. $\forall n, m: \neg \exists x_n \phi \equiv \neg \exists x_m \phi$ (if ϕ is truth-distributive)
      b. $\forall n, m: \triangle \exists x_n \phi \equiv \triangle \exists x_m \phi$

- ▶ We correctly predict #NPI & #deoFC (no reason here for CC-shift):

(44) a. ??Non ho risposto a una qualche domanda.   [#NPI]
      b. #I didn't answer any question
      c. $\neg \exists x_n \phi$
      d. $\sigma[\neg \phi]\{i \in \sigma \mid \neg \exists \sigma' : \sigma[\phi]\sigma' \ \& \ i \prec \sigma'\}$

(45) a. Maria deve sposare un qualche professore.   [#deoFC]
      b. #Maria must marry a professor, any professor is a permissible option
      c. $\triangle \exists x_n \phi$
      d. $\sigma[\triangle \phi]\{i \in \sigma \mid F(i)_D \vdash \phi\}$

The case of *irgend*-indefinites: CC+DW

- spMV, epiMV: as for *un qualche*
- NPI: via DW + SMALLCAPS STRENGTHENING:

  (46) a. Niemand hat *irgendjemanden* angerufen.
        b. Nobody called anybody
        c. $\neg\exists x_m \underline{\exists x_n} \phi$
        d. Prediction: *irgend* felicitous, no epistemic effect

- DeoFC: problem!

  (47) a. Marie muss *irgendeinen* Doktor heiraten.
        b. Mary has to marry *irgend*-one doctor
        c. $\exists x_n \triangle \phi$ $\qquad\qquad\qquad\qquad \Rightarrow$ [spMV]
        d. $\triangle \exists x_n \phi$ $\qquad\qquad$ (neither CC+WE nor DW+ST)
        e. Prediction: spMV, #deoFC

Predictions

	spMV	epiMV	NPI	deoFC
un qualche (only CC)	yes	yes	no	no
irgend (CC+DW)	yes	yes	yes	no [problem!]

Possible solutions

- Performative analysis of deontic modals (Lewis 1979):
  - FC inference as semantic entailment
  - Felicity via DW + strengthening
  - Problem: what about non-performative cases, and #deoFC for plain indefinites
- Kratzer & Shimoyama's anti-exhaustivity inference:
  - FC inference as pragmatic effect
  - Felicity: add new option in DW–felicity condition, e.g. avoidance false exhaustivity inference
  - Problem: FC inference not defeasible
- The crucial role of accent

The crucial role of accent

- In free choice uses and in comparatives, the *irgend*-indefinite must be stressed (Haspelmath 1997):

  (48) Dieses Problem kann IRGEND JEMAND lösen.
        'This problem can be solved by anyone'

  (49) Joan Baez sang besser als IRGEND JEMAND je zuvor.
        'Joan Baez sang better than anyone ever before'

- Two effects of focus in an inquisitive/alternative semantics:

  (50) JOHN$_F$ called $\mapsto \langle$Th:?$\exists x . C(x)$, Rh: $[\exists]C(j)\rangle$

  1. introduces division between a theme (alternative set) and a rheme (Balogh 2009) $\Rightarrow$ deoFC via obligatory application of pragmatic operation à la Kratzer & Shimoyama
  2. flattens logical form (Roelofsen & van Gool 2009) $\Rightarrow$ universal meaning in comparatives (building on Aloni 2007)

Indefinites in comparatives (building on Aloni 2007)

(51) *Any* in comparatives
  a. John is taller than any girl.
  b. $[\forall](\text{SHIFT}_e(\mathbf{Exh}[d, \lambda d . T(j, d)]) >\text{SHIFT}_e(\mathbf{Exh}[d, \lambda d . T(\text{any girl}, d)])$
  c. Predicted meaning: For all girls x, John is taller than x

(52) *Some* in comparatives
  a. John is taller than some girl.
  b. $[\exists](\text{SHIFT}_e(\mathbf{Exh}[d, \lambda d . T(j, d)]) >\text{SHIFT}_e(\mathbf{Exh}[d, \lambda d . T(\text{some girl}, d)])$
  c. Predicted meaning: For some girl x, John is taller than x

(53) IRGEND in comparatives
  a. John is taller than IRGENDEIN girl.
  b. $[\exists](\text{SHIFT}_e(\mathbf{Exh}[d, \lambda d . T(j, d)]) >\text{SHIFT}_e(\mathbf{Exh}[d, \lambda d . [\exists] T(\text{irgend girl}, d)])$
  c. Predicted meaning: For all girls x, John is taller than x

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