Unspecific indefinites do not have a uniform semantic type: Evidence from German

Nina Haslinger (Georg-August-Universität Göttingen)
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Starting point

Semantic variability of sentences with intensional transitive verbs (ITV) – focus on look for/German suchen

(1) a. John is looking for a book.
   b. John is looking for something.

Pre-theoretically, we can distinguish classes of scenarios making (1-a,b) true on the basis of

• extensionality/intensionality
• (non-)specificity

General question

To what extent is the grammar of German, a language without morphological (non-)specificity marking, sensitive to distinctions involving specificity and intensionality?
Extensionality

In every world/situation where John’s search is successful, he finds something that is a book in the actual world.

Why do we assume that verbs like look for have non-extensional readings?

- No existential entailment

  \[(2) \quad \text{John is looking for a bottle of wine produced in Antarctica.}\]

- Substitution of coextensional expressions not truth-preserving

  \[(3) \quad \text{SCENARIO: All Austrian skiers are drunk.} \\
  \text{John is looking for an Austrian skier.} \not\Rightarrow \text{John is looking for a drunk Austrian skier.}\]
Specificity
Each world in which John’s search is successful contains a unique individual matching his search goals.

Less clear how to give a linguistic (non-mentalistic) test in English/German unless we want to rely on modifiers like definite, particular, certain


But the situation seems to be different in other languages:

Deal (2008): Morphosyntactic (non-)specificity marking
e.g. West Greenlandic (van Geenhoven & McNally 2005), Hindi, Nez Perce

1 (Non-)specificity may be marked on the argument (case, agreement) and on the verb (antipassive morphology)

2 Sensitive to a distinction between individual (type e) and property (type ⟨s, et⟩) arguments

3 Lexically extensional predicates may also take property arguments given presence of morphological marking

4 Analysis: Property arguments associated with extra operator on the predicate. This operator contributes both non-specificity and intensionality, so these two properties are correlated.
Starting point

In German, complements of ITV fall into two semantically distinct classes. At first sight, they seem to behave differently wrt. ‘specificity’ or ‘intensionality’.

e.g. Moltmann 2008, 2013

(4)  
   a. higher-order DPs (hDPs): *John is looking for something.*
   also known as ‘special quantifiers’ (Moltmann 2008) or ‘propositional DPs’ (Elliott 2017)

   b. ordinary DPs (oDPs): *John is looking for someone/a book.*

Claims

• The oDP/hDP contrast in German supports Deal’s (2008) claim that natural language grammars are sensitive to a type distinction between individual vs. property arguments

• But this type distinction does not correspond straightforwardly to the pre-theoretical notion of specificity

• Further, we find intensional readings with non-property arguments ⇒ argument for dissociating intensionality and property type cf. also Zimmermann 2001
Higher-order DPs vs. ordinary DPs

Higher-order DPs as arguments of ITV: A simple analysis

Dissociating intensionality, unspecificity and property type
‘Higher-order DPs’ (hDPs)

• higher-order DPs:
  • *something, everything, the same thing, that, …*
  • German *etwas* ‘something’, *zwei Sachen* ‘two things’, *dasselbe* ‘the same thing(s)’ …
  • possibly certain lexical DPs like *dieser Blödsinn* ‘that nonsense’

• ordinary DPs:
  • *someone, everyone, the same person, he, it …*
  • DPs with most lexical nouns: *a book, every book, the same book …*
  • German *ein Buch* ‘a book’, *zwei Bücher* ‘two books’, *dasselbe Buch* ‘the same book’ …

The basic semantic distinction is that hDPs are more type-flexible than oDPs.


**First point:** Independent arguments for this that do not involve ITV.
‘Higher-order DPs’ (hDPs)

Embedded questions are usually analyzed as having semantic type $\langle s, \langle s, t \rangle, t \rangle$ or $\langle s, \langle s, t \rangle \rangle$.

Many question-embedding predicates also select concealed-question DPs.

(5)  
   a. *James figured out what the plane's arrival time would be.*  
      (Grimshaw 1979:297, (67-a))
   b. *James figured out the plane's arrival time.*  
      (Grimshaw 1979:298, (68-a))

But not all of them do – e.g. wonder

(6)  
   a. *I wonder what answer he gave.*  
      (Grimshaw 1979:302, (92-a))
   b. *I wonder the answer he gave.*  
      (Grimshaw 1979:302, (93-a))

What is the nature of this restriction? Syntactic category (Grimshaw 1979, Pesetsky 1983) or semantic type (Nathan 2006 a.o.)?
‘Higher-order DPs’ (hDPs)

Nathan (2006): The restriction is semantic. Some DPs do combine with predicates like wonder.

(7) a.  *Kim wondered who left, and Sandy wondered that as well.*  
(Nathan 2006:42, (23-a))

b.  *Kim wondered who left, and Sandy wondered the same thing.*  
(Nathan 2006:42, (23-b))

Consequence

DPs do not all correspond to the same class of semantic types.

It has been argued on independent grounds that concealed-question DPs do not have the semantic type of a question (⟨s, ⟨⟨s, t⟩, t⟩⟩). Heim 1979, Nathan 2006 a.o.

Only certain special DPs, like *that* or DPs with head noun *thing*, can have type ⟨s, ⟨⟨s, t⟩, t⟩⟩ (or quantify over this type). We will call these higher-order DPs (hDPs).

Elliott (2017) shows that an analogous argument can be made on the basis of DP arguments of attitude verbs.
The emerging picture

Determiners are cross-categorial expressions. So are other functional elements in the DP (numerals, abstraction in relative clauses).

1. Definites: type \( \langle \langle a, t \rangle, a \rangle \) for arbitrary \( a \)

2. Quantifiers: type \( \langle \langle a, t \rangle, \langle \langle a, t \rangle, t \rangle \rangle \) for arbitrary \( a \)

‘Ordinary’ NPs have their semantic type specified in the lexicon (predicates of individuals, events …). This can only be changed by a restricted set of shifting operations.

‘Higher-order’ NPs like thing are lexically cross-categorial (type \( \langle a, t \rangle \) for arbitrary \( a \)).

Next step

Show that this distinction also matters for complements of intensional transitive verbs (ITV) like German suchen ‘look for’.

See Moltmann (2008, 2013) for independent arguments supporting this.
1. Higher-order DPs vs. ordinary DPs

2. Higher-order DPs as arguments of ITV: A simple analysis

3. Dissociating intensionality, unspecificity and property type
We are interested in unspecific, intensional readings of sentences like (8):

(8)  *John is looking for a book.*

Such readings are usually analyzed in terms of higher-type arguments.


(9)  a. \[ \text{[look for]} = \lambda w. \lambda P_{(s,et)}. \lambda x. \forall w' [w' \in \text{TRY}(w)(x) \rightarrow \exists y [P(w')(y) \land \text{find}(w')(y)(x)]] \]

     b. \( \text{TRY}(w)(x) = \{ w' | x's \text{ attempts in } w \text{ are successful in } w' \} \)

(10) ‘For every world \( w' \) in which John’s search in \( w \) is successful: John finds something in \( w' \) that is a book in \( w' \).’
Background: Semantics of unspecific indefinites

How does the verb combine with an indefinite argument – e.g. \([a \text{ book}]\) – if the latter is a quantifier and the verb needs a property?

• **Most analyses:** \([a \text{ book}]\) can have a property denotation – either primitively (cf. Landman 2004 for discussion) or via a type-shift:

\[
\begin{align*}
\text{(11) a. } [\text{BE}] (w) &= \lambda Q_{\langle e, t \rangle, t}. \lambda x. Q(\lambda y. y = x) \\
\text{b. } [\text{BE} [a \text{ linguist}]] &= \lambda w. \lambda x. \text{linguist}(w)(x)
\end{align*}
\]

\(\rightsquigarrow\) indefinite directly serves as argument of the verb

• **Zimmermann (2006):** \(a \text{ book}\) has a reading where it quantifies over properties of books

\[
\begin{align*}
\text{(12) a. } [\text{book}^\prime] &= \lambda w. \lambda P_{\langle s, et \rangle, t}. \forall x, w'[P(w')(x) \to \text{book}(w')(x)] \\
\text{b. } [a \text{ book}^\prime] &= \lambda w. \lambda \mathcal{P}_{\langle s, et \rangle, t}. \exists P[\forall x, w'[P(w')(x) \to \text{book}(w')(x)] \wedge \mathcal{P}(P)]
\end{align*}
\]

\(\rightsquigarrow\) indefinite binds a property variable in the verb's argument position

• **What I will claim:** The former view is correct for oDPs, the latter for hDPs.
Argument 1a: Relative clauses

Zimmermann (1993, 2006): hDPs can contain a relative clause with abstraction over the property argument.

(13)  *Der Peter sucht etwas, das die Maria auch gerade sucht.*

the Peter seeks something the Maria also currently seeks

‘Peter is looking for something that Maria is also looking for at the moment.’

(14)  **SCENARIO**: Peter and Maria want to rearrange their bookshelves. They both independently read about the latest trend in interior design, which is to sort one’s books by color. Peter is looking for an arbitrary book with a light green cover to complete his arrangement. So is Maria, but neither of them knows about the other’s search.

This scenario is unspecific and intensional wrt. both Peter’s and Maria’s search.

We would be unable to account for this construal if we took the variable created by relativization to range over individuals.

**Conclusion**: The RC in (13) expresses a predicate of properties. The object DP in (13) quantifies over properties.
Argument 1a: Relative clauses

(15) Der Peter sucht etwas, das die Maria auch gerade sucht.
‘Peter is looking for something that Maria is also looking for at the moment.’

\[
\begin{array}{c}
\langle e, t \rangle \\
\langle s, et \rangle \\
g(1, \langle s, et \rangle) \\
\langle\langle s, et \rangle, et \rangle \\
sucht \\
sucht \\
seeks \\
seeks
\end{array}
\]

Truth conditions

(16) ‘There is a property \( P \) such that Peter finds a \( P \) in each world where his search is successful, and Maria finds a \( P \) in each world where her search is successful.’

Side remark: Quantification over arbitrary properties yields implausible truth conditions – restricted domain needed

Zimmermann 2006, Haslinger 2019
Argument 1a: Relative clauses

Importantly, this behavior is not shared by oDPs:

(17) **SCENARIO**: Peter and Maria want to rearrange their bookshelves. They both independently read about the latest trend in interior design, which is to sort one’s books by color. Peter is looking for an arbitrary book with a light green cover to complete his arrangement. So is Maria, but neither of them knows about the other’s search.

(18) *Der Peter sucht ein Buch, das die Maria auch gerade sucht.*

‘Peter is looking for a book that Maria is also currently seeking.’

%not true

**Observation**

oDPs cannot easily combine with ‘higher-type’ relative clauses and cannot easily express quantification over subproperties of the NP extension.

This is unsurprising if ordinary NPs need to have type $\langle e, t \rangle$.

*contra* Zimmermann 2006

To combine with the NP, the RC has to denote a predicate of individuals, so the trace of the relative pronoun must be of type $e$. 

Argument 1a: Relative clauses

(19) *Der Peter sucht ein Buch, das die Maria auch gerade sucht.*

‘Peter is looking for a book that Maria is also looking for at the moment.’

\[
\lambda w. \lambda x. x = g(1, e)
\]

sucht

\[
\text{IDENT(e)}
\]

\[
\text{IDENT} \langle s, et \rangle = \lambda w. \lambda y. y = x
\]

Partee 1987

Truth conditions

(21) ‘There is a book \(x\) such that Maria finds \(x\) in each world where her search is successful and Peter finds \(x\) in each world where his search is successful.’

This corresponds to the standard semantics for relative clauses without ITV.
Argument 1b: Numerals

The relative-clause judgments are subtle and subject to speaker variation – can we find clearer evidence for this distinction?

(22) **SCENARIO:** Peter wants to rearrange his bookshelves. He read about the latest trend in interior design, which is to sort one's books by color. To complete his arrangement, Peter needs at least three white and at least three black books.

(23) *Der Peter sucht nur zwei Sachen.*

the Peter seeks only two things

‘Peter is looking for only two things.’ \textcolor{red}{true}

(24) *Der Peter sucht nur zwei Bücher.*

the Peter seeks only two books

‘Peter is looking for only two books.’ \textcolor{red}{false}

**Observation**

Numerals within a hDP can count properties, but numerals within an oDP cannot count subproperties of the NP extension.
Argument 1b: Numerals

Again, this contrast follows from our assumption that oDPs have a lexical type requirement which hDPs lack.

(25) \[
[[\text{zwei Bücher}]] = \lambda P_{<e,t>} . \exists x e[ ^* \text{book}(x) \land |x| = 2 \land P(x)]
\]

(26) \[
[[\text{zwei Sachen}]] = \lambda P_{<s,et>,t} . \exists P_{<s,et>}[|P| = 2 \land P(P)]
\]

Side remarks

• Cross-categorial meaning for numerals requires pluralities of properties

Schmitt 2013, to appear

• More needs to be said about how counting works for domains structured by an entailment relation

e.g. Sutton & Filip 2019
Argument 2: Wide scope

We will look at sentences where an *ex situ* (wide scope) interpretation of the indefinite is preferred (scrambling + marked prosody).

(27) **SCENARIO:** Hans owns a bookstore. In the last few months, almost no customers came to look for particular books, but one topic was surprisingly popular: Almost half of the customers were looking for Austrian novels from the inter-war period.

(28) a. *Es ist auffällig, dass /EINE Sache fast jeder \ZWEITE gesucht hat.*
   ‘It is striking that there was one thing that almost every second person searched for.’  
   *true*

b. *Es ist auffällig, dass /EIN Buch fast jeder \ZWEITE gesucht hat.*
   ‘It is striking that there was one book that almost every second person searched for.’  
   *false*

**Observation**

In some cases, giving an oDP wide scope seems to block the unspecific reading. There is no corresponding effect for hDPs.
Argument 2: Wide scope

If scrambled oDPs must leave a trace of type e, we actually expect them to get a specific, extensional reading in this configuration.

(29) *Es ist auffällig, dass /EIN Buch fast jeder \ZWEITE gesucht hat.*

‘It is striking that there was one book that almost every second person searched for.’
Argument 2: Wide scope

Scrambled hDPs may leave a trace of type $\langle s, et \rangle$, licensing an unspecific reading.

(30) \textit{Es ist auffällig, dass /EINE Sache fast jeder \ZWEITE gesucht hat.}  
\textquote{It is striking that there was one thing that almost every second person searched for.}

\begin{center}
\begin{tikzpicture}
\node[latent]{$\langle e, t \rangle$} ;
\node[latent,below left = of $\langle e, t \rangle$]{$\langle s, et \rangle$} ;
\node[latent,below right = of $\langle e, t \rangle$]{$\langle \langle s, et \rangle, et \rangle$} ;
\node[latent, below = of $\langle \langle s, et \rangle, et \rangle$]{$t(1, \langle s, et \rangle)$} ;
\node[obs, below = of $t(1, \langle s, et \rangle)$]{$\text{sucht}$} ;
\end{tikzpicture}
\end{center}
Interim summary

• We motivated the distinction between o(rdinary)DPs and h(igher-order)DPs.
• We then saw that this distinction affects the interpretation of indefinite complements of ITV.

• Indefinite hDPs have ‘unspecific’ readings, but do not behave like immediate arguments of the ITV. They seem to be quantifiers that bind the ITV’s property argument.

  Zimmermann 1993, 2006

• But ordinary unspecific indefinites do not behave like quantifiers over properties.
  cf. also Moltmann 2008, 2013

• We modeled the contrast as a type distinction between quantifiers over individuals and over properties.

Next step: Problem

Given our usual notion of an individual, this implementation leads us to expect fewer cases of unspecificity and intensionality with oDPs than we actually find.
1 Higher-order DPs vs. ordinary DPs

2 Higher-order DPs as arguments of ITV: A simple analysis

3 Dissociating intensionality, unspecificity and property type
Predictions of the current picture

- If an indefinite oDP is interpreted *in situ* as an object of *suchen/look for*, it may have an unspecific, intensional reading.
- If an indefinite oDP is interpreted in a derived position, the interpretation is specific and extensional (as opposed to that of hDPs).

Next steps

- Problem 1 (less serious): oDPs in derived positions permit a restricted form of unspecificity
- Problem 2 (more serious): oDPs in derived positions permit (specific) intensional readings
- Brief sketch of what could be done to address problem 2 (no full formal implementation)
Problem 1: Ex-situ oDPs can be ‘unspecific’

Type/token ambiguities

Ordinary indefinites like *a book* can range over ‘types’ of books (literary works) or ‘tokens’ (copies).

(Similar ambiguities found with other nouns, e.g. *drink* (cf. Kaufmann & Zimmermann 2009) or *bus, train* etc. (cf. Nathan 2006)).

On the ‘type’ reading, it seems they permit an unspecific interpretation relative to the individual copies of each book.

(Magdalena Kaufmann and Thomas Ede Zimmermann, p.c.)

Importantly, we find this interpretation even in configurations that usually disallow unspecific readings.

Wide scope + unspecificity

(31) *Es ist auffällig, dass /EIN Buch fast jeder \ZWEITE gesucht hat.*

It is striking that there was one book that almost every second person searched for.

(32) **SCENARIO:** A bookstore owner is asked what types of books his customers like. In the last few months, almost half of the customers were looking for an arbitrary copy of Kafka’s ‘The Trial’.

(31) true
Restrictions on ex-situ readings of oDPs

• It seems that *a book* may be interpreted as quantifying over properties
  • if the relevant properties resemble [*a copy of ‘The Trial’]*
  • but not if they resemble [*a book with a green cover*].
• There is no deep grammatical reason why these properties should behave differently.

Two kinds of unspecificity
• ‘Type’ readings of oDPs permit unspecificity, but they are restricted to special sets of ‘individuating’ properties specified by the lexical semantics of the noun.
• On the other hand, hDPs may range over arbitrary properties.
What does this mean for our type distinction?

There is some linguistic evidence that oDPs on their type reading are not literally property denoting, e.g. book ‘types’ shouldn’t literally be treated as properties of physical books:

(33)  *Ich suche dieses Buch.*
I seek this book
‘I’m looking for this book.’

(34)  a.  **SCENARIO:** I’m pointing at a picture of a book in a catalogue. I’m looking for an arbitrary copy of the text in question.  \textbf{true}

b.  **SCENARIO:** I’m pointing at a picture of a book in a catalogue. I’m trying to find some information about the book in a database, e.g. its publication year and ISBN, but I don’t want a copy.  \textbf{true}

(35)  *Ich suche ein Exemplar von diesem Buch.*
I seek a copy of this book
‘I’m looking for a copy of this book.’  \textbf{true} in (34-a), \textbf{false} in (34-b).

We can look for a book ‘type’ without trying to find a token. The properties expressed by ordinary unspecific indefinites behave differently.
What does this mean for our type distinction?

Summing up …

The properties that occur in ‘type’ readings of nouns like book

• belong to certain restricted sets
• and behave differently in semantic composition (no inference that subject is looking for a token)

Therefore, it is plausible to assume that even these oDPs are not treated as property-denoting by the compositional semantics: Some properties can be treated as individuals for the purposes of composition.

So the type distinction between individuals and ‘genuine’ properties that grammar is sensitive to does not correspond to ‘(un)specificity’ in the pre-theoretical sense.
Problem 2: Ex-situ oDPs can be intensional

Sentences with *suchen* + oDP are true in intensional scenarios even if the oDP is not interpreted *in situ* (relativization or scrambling).

(36) **SCENARIO**: Peter and Hans are strong believers in the paranormal and spend their weekends hunting for ghosts. They are generally unsuccessful as there aren’t any ghosts. Last week, Hans went to the local castle and tried to track down the ghost of its former owner. Today, Peter came up with the same idea and came to the castle as well, not knowing that Hans already went there last week.

(37) *Der Peter sucht ein Gespenst, das der Hans schon letzte Woche erfolglos gesucht hat.*

‘Peter is searching for a ghost that Hans already searched for unsuccessfully last week.’

In the relevant scenarios, the goal of the search can be captured by a **definite description**, which fails to refer in the actual world.

So it seems that the traces of oDPs don’t always have to range over individuals.

But we just argued against the idea that they range over properties – so what should we do?
Analysis idea (informal sketch)

• The traces of oDPs like *a ghost* range over the kind of objects definite descriptions denote – **partial individual concepts**.

• The idea that ordinary NL quantifiers range over individual concepts is explored in a range of recent work (Aloni 2001, Condoravdi et al. 2001a,b, Schwager 2007, Schmitt 2019, this conference)

• Basic intuition behind many of these works: DP quantifiers are generally interpreted relative to a **conceptual cover**.

• Roughly, covers correspond to different ways of identifying elements of the domain across possible worlds (naming, different sets of definite descriptions … ).

• For our purposes, covers have to be relativized to the NP meaning: For each world in their domain, the concepts should return individuals satisfying the NP-predicate (*ghost*) in that world.

• The domain of the individual concepts must include all worlds where the search is successful. But it does not have to include the actual world.

• This gives us a reading that is **intensional** (*de dicto*), but also **specific**.
Ordinary DP quantifiers range over individual concepts

Partial $P$-cover

For any predicate $P$, a partial $P$-cover is a set $C \subset D_{s,e}$ of nonempty partial individual concepts such that:

a. For each world $w$ and each individual $x \in P(w)$, there is exactly one $f \in C$ such that $f(w) = x$.
b. For each $f \in C$ and each world $w$ where $f(w)$ is defined, $f(w)$ satisfies $P(w)$.

NB: In each world, all the values of concepts in the cover are distinct – needed for pluralization/counting

We assume that DPs are generally interpreted relative to a contextually salient partial cover of the NP-denotation.

(38) $\left[ a_i \text{ ghost} \right]^{c} = \lambda w. \lambda P_{\langle s,e \rangle,t}. \exists f \left[ f \in C_{c,i}(\text{ghost}) \land P(f) \right]$

Here $C_{c,i}(P)$ is the partial $P$-cover corresponding to the identification method assigned to index $i$ in context $c$.

cf. Aloni 2001

Note that the DP has to combine with a predicate of individual concepts (not real-world individuals). How does this work?
Ordinary DP quantifiers range over individual concepts

Traces of oDPs have non-trivial intensions (cf. Montague 1974, recently Aloni 2001)

\[
\langle s, et \rangle \\
\lambda w. \lambda x. \forall w' [w' \in \text{TRY}(w)(x) \rightarrow \text{find}(w')(g(1, \langle s, e \rangle)(w'))(x)]
\]

\[
\langle s, \langle s, et \rangle \rangle \\
\lambda w. \lambda y. y = g(1, \langle s, e \rangle)(w))
\]

\[
\langle s, \langle e, \langle e, t \rangle \rangle \rangle \\
\lambda w. \lambda x. \lambda y. y = x\\
\text{IDENT}
\]

\[
\langle s, e \rangle \\
\lambda w. \lambda y. y = x\\
\text{t}(1, \langle s, e \rangle)
\]

Once we reach the indefinite, we abstract over an individual-concept variable.

Predicted truth conditions

(39) *Peter is looking for a ghost that Hans unsuccessfully looked for last week.*

(40) ‘There is an individual concept f (in a contextually salient set) such that

a. for any world w' where f(w') is defined, f(w') is a ghost in w'

b. Peter is engaged in a search such that in any world w' where it is successful, Peter finds f(w')

c. and last week Hans was engaged in an unsuccessful search such that for any world w' where it is successful, Hans finds f(w').’
Consequences of the move to individual concepts

• In extensional contexts, it does not make much of a difference: we only care about the values of the individual concepts in the evaluation world.

• But in the context of ITV like *suchen*, we now permit oDPs to have a specific intensional reading even if they outscope the ITV.

• Since oDPs still cannot range over arbitrary properties (⇒ no real unspecific intensional reading), our earlier conclusions about hDPs and in-situ oDPs are not affected.

Open problem
Any analysis with partial individual concepts runs into intentional identity puzzles.

Let’s say Peter and Hans are both at the castle looking for the ghost of the previous owner, but the sets of worlds in which their respective searches are successful are disjoint.

The present system then predicts that we can say they are looking for two distinct ghosts – even if they would identify the ghost by the same definite description.

Geach (1967)
Conclusions

• **Starting point:** Data from languages with morphological (non-)specificity marking support a distinction between property-type and individual-type complements of ITV. van Geenhoven & McNally 2005, Deal 2008

• We’ve seen that this distinction also matters for the grammar of German, a language without morphological non-specificity marking.

• In German, the contrast between o(ordinary) and h(igher-order) DPs shows that the grammar is sensitive to the individual/property distinction.

• Some configurations (relative clauses, *ex situ* interpretation) block ‘genuine’ property readings of oDPs.

• But they do not block all kinds of unspecific readings, which shows that our pre-theoretical notion of unspecificity does not map neatly on the type system.

• Property type and intensionality are unrelated – non-property-type complements do not always denote / quantify over individuals. 

  cf. also Zimmermann 2001, data discussed in Moltmann 1997
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Predictions of the simple analysis: Wide scope

(41) *Es ist auffällig, dass /EIN Buch fast jeder \ZWEITE gesucht hat.*

‘It is striking that there was one book that almost every second person searched for.’

**Truth conditions**

(42) a. \( \lambda w. \exists x [\text{book}(w)(x) \land \forall y [\text{person}(w)(y) \rightarrow \forall w' [w' \in \text{TRY}(w)(y) \rightarrow \text{find}(w')(x)(y)]]] \)

b. ‘There is a book \( x \) such that for every person \( y \), \( y \) finds \( x \) in each world in which \( y \)’s search is successful.’
Predictions of the simple analysis: Wide scope

(43) *Es ist auffällig, dass /EINE Sache fast jeder \ZWEITE gesucht hat.*

‘It is striking that there was one thing that almost every second person searched for.’

Truth conditions

(44) a. \( \lambda w. \exists P_{<s,et>} [\forall y[\text{person}(w)(y) \rightarrow \forall w' [w' \in \text{TRY}(w)(y) \rightarrow \exists x[P(w')(x) \land \text{find}(w')(x)(y)]]]] \)

b. ‘There is a property \( P \) such that for every person \( y \) and every world \( w \) in which \( y \)’s search is successful, \( y \) finds some individual with property \( P \) in \( w \).’
The idea of individual counterparts of properties also comes up in semantic work on kind predication, particularly the analysis of bare plurals (Carlson 1980 [1977], Chierchia 1998).

It is questionable whether ‘type’ readings of oDPs are a subcase of kind predication – two relevant observations:

• Not every property corresponding to a kind permits a ‘type’ reading:

  (45)  a.  Books with green covers are rare.
  b.  Drinks served in shot glasses are widespread.

• We don’t want to identify e.g. books in the ‘type’ sense with kinds of their copies:

  (46)  a.  John is looking for this book.
  b.  John is looking for copies of this book.
Returning to the cross-linguistic situation …

The move to individual concepts might help us with a puzzling fact noted in the literature on languages with predicate-level unspecificity marking. e.g. Deal 2008

In such languages …

(e.g. West Greenlandic (van Geenhoven & McNally 2005) and Nez Perce (Deal 2008))

- the predicate-level marking is analyzed as contributing intensionality + allowing the predicate to combine with a property-type argument
- this marking isn’t found with referential expressions (proper names, definites) or yields unexpected readings

This suggests that definites do not have property readings. But then why do definite objects still have ‘de dicto’ (= intensional) readings? Deal 2008

This data pattern would be unsurprising under the present approach, which dissociates intensionality and property type.
Scenario: A group of foreign political journalists have just arrived in Austria. They are at a party with most of the Austrian political elite. Since they heard that there is a political crisis in Upper Austria, they are trying to interview the governor of that state, without knowing what he looks like. What they do not know is that there is currently no governor of Upper Austria, since the last governor resigned.

Es ist auffällig, dass /Einen Landeshauptmann \JEder von den Journalisten
it is striking that one governor each of the journalists
sucht.
seeks
‘It is striking that there is one governor each of the journalists is looking for.’
Individual-concept readings: LF syntax

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\lambda_{1,(s,e)}(\langle s, (\langle s, e \rangle, t) \rangle) \langle s, t \rangle
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\lambda_{2,(s,e)}(\langle s, (\langle s, e \rangle, t) \rangle) \langle s, t \rangle
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\lambda_{1,(s,e)}(\langle s, (\langle s, e \rangle, (s, e)) \rangle) \langle s, t \rangle
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