1. Classes of transitive intensional verbs permitting sharing

Two verbs of absence

(1) a. John needs what Mary is looking for

Verb of possession – verb of absence

b. John has / owns / possesses what Mary needs.

c. Mary needs what John has / owns / possesses.

Epistemic verb – verb of absence

d. John found what Mary needs, a suitable collaborator.

e. Mary needs what John found, a suitable collaborator.

Verb of creation – verb of absence

f. John found what Bill needs, an assistant / a wife

2. The situations involved

2.1. The role of have

(2) a. John needs an assistant.

b. John needs help.

c. John needs advice.

d. John needs a kiss.

e. John needs recognition

have or receive?

2.2. Satisfaction situations involving predication

Verbs of ‘creation’:

(3) a. John is looking for an assistant.

b. John is looking for a wife

(4) a. John found an assistant.
b. John found a wife.

S satisfaction situation of John’s search: ∃d ∈ D(s) (Make_s(John, d, ‘assistant’))

Epistemic verbs:
(5) a. John is looking for a suitable collaborator.
   b. John found a suitable collaborator (namely his wife)
   c. S satisfaction situation of John’s search: ∃d ∈ D(s) (Recognize_s(John, d, ‘collaborator’))

Sharing predicative satisfaction situations
(6) a. John found what Bill found, a suitable collaborator.
   b. John found what Bill found, an assistant.
   c. John is looking for what Bill found, a suitable collaborator.
   d. John is looking for what Bill found, an assistant.

Shared satisfaction situations for verbs of creation:
situations s such that: ∃d ∈ D(s) (Make_s(agent(s), d, ‘assistant’))

Shared satisfaction situations for epistemic verbs:
situations s such that: ∃d ∈ D(s) (Recognize_s(agent(s), d, ‘assistant’))

Predicative satisfaction situations and opacity:
opacity with psychological verbs of absence, epistemic verbs
(7) a. John is looking for an eye doctor
   b. John is looking for an ophtamologist.
   c. ∃d ∈ D(s) (Recognize_s(agent(s), d, ‘eye doctor’))

3. Definite intensional NPs
3.1. The construction
(8) a. The assistant John needs must be fluent in French.
   b. The assistant John needs to hire needs to be fluent n French.
   c. The book John needs to write must have a great impact.
   d. John book John must write may be short.
   e. The book John hopes to write might have a lot of impact.

Characteristics:
- Transitive and clausal-complement-taking verbs
- Modal Compatibility Requirement
- Definite article quasi-obligatory

Standard approach: reference to individual concepts (Moltmann 2008)

3.2. Accounting for uniqueness

‘The book John needs to write’

‘The assistant John needs’

The function mapping a situations s (exactly) satisfying John’s need to the unique object d in s that is the book John writes in s / the assistant John has hired in s.

3.3. Definite intensional NPs with predicative situations

(9) a. the assistant John needs

   b. the collaborator John is looking for

The function mapping a situations s (exactly) satisfying John’s need to the unique object d in s such that

   - Make_s{(John, d, ‘assistant’)}
   - Recognize_s{(John, d, ‘collaborator’)}

(9) c. the e [John needs e’ assistant]

   d. the e [John is looking for e’ collaborator]

small clause structures?

(10) the gifted mathematician John claims to be (Grosu/Krifka 2007)

4. Definite intensional NPs and the shared object of transitive intensional verb

Observations about sharing

Verbs of creation

(11) a. John met the assistant he was looking for.

   b. John found the assistant he was looking for.

   c. John hired the assistant he was looking for.

Epistemic verbs

(12) a. John found the collaborator he was looking for.

   b. John met the collaborator he was looking for.

Verbs of absence

(13) John needs the assistant he is looking for.
Differences:

Two verbs of absence
(14) a. John needs what Mary needs.
    b. John needs the assistant Mary needs.
(15) a. John needs what Mary is looking for too, a good advisor
    b. John needs the advisor Mary is looking for.
    c. John needs the paper Mary promised.

\rightarrow John needs Mary’s promised paper

One verb of absence
(16) a. John needs what Mary found, a good advisor.
    b. John needs the advisor Mary found.
(17) John found the advisor that Mary needs.

\rightarrow John found an advisor for Mary

Conclusion:
Definite intensional NPs do not allow for sharing of situations with different agents
Special NPs allow for sharing of situations with different agents

Further difference:
Definite intensional NPs are possible also with clausal-complement-taking verbs, but not special NPs expressing sharing of situations:
(18) a. John needs the paper Mary promised
    b. John found what Mary needs, a doctor.
(19) a. ?? John needs what Mary promised: to write
    b. * John found what Mary needs, to write a good paper.

An account of definite intensional NPs
Using individual concepts:
functions dependent on a need, a promise, a finding etc
(20) a. the book Mary needs to write.
    b. the function f mapping any situation s that satisfies Mary’s need onto :
        id[paper, (d) & writes(Mary d)]
(21) a. The assistant Mary needs
    b. the function f mapping any situation s that satisfies Mary’s need onto:
\[ \text{td}[\text{Have}(\text{Mary}, \text{d}) \& \text{Make}(\text{Mary}, \text{d}, \text{‘assistant’})] \]

(22) a. the collaborator Mary is looking for
    b. the function \( f \) mapping any situation \( s \) that satisfies Mary’s search onto:
\[ \text{td}[\text{paper}_s(\text{d}) \& \text{recognize}(\text{Mary}, \text{d}, \text{‘collaborator’})] \]

**Predicates possible with definite intensional NPs**

**Predicates with modals:**
(23) a. the paper Mary needs to write must be 20 pages long.
    b. the paper Mary needs to write is 20 pages long.

**Intensional (?) predicates:**
(24) a. John found the assistant Mary needs.
    b. Mary hired the assistant she was looking for.

**Other predicates:**
(25) a. John counted the papers he needs to write before the end of the year.
    b. John enumerated the papers he needs to write.
    c. John described the assistant he is looking for.

**Trope-referring terms:**
(26) a. the impact of the book John needs to write
    b. the number of assistants John needs

**Problems with functions (individual concepts):**
- Application of predicates
- Bearer of tropes

**Compositional semantics:**
(27) a. the book John needs to write
    b. the \( f \) [for all \( s, s R w \), write\(_s\) (John, \( f(s) \)) \& book\(_s\)(\( f(s) \))]
    c. the \( e \) [John needs to write \( e \) book]

(28) a. the impact of the book John needs to write
    b. the \( e \) [John needs to write \( e \) book impact]

**Intensional definite NPs as standing for variable objects**
‘the assistant Mary needs‘: variable object that in any situation \( s \) satisfying Mary’s need has as its manifestation a person that is Mary’s assistant in \( s \)
the book Mary needs to write ‘: variable object that in any situation s satisfying Mary’s need has as its manifestation a book that Mary writes in s

5. An account of sharing with special quantifiers
Make use of kinds:
Special quantifiers with other predicates:
(29) a. Mary thinks what John thinks
   b. the thought that Mary has = the thought that John has.
(30) a. Mary is what John is, very wise
   b. wisdom, which is what Mary hat = wisdom, which is what John has

(31) a. John needs what Mary needs, an assistant
   b. the need for an assistant
   c. John has the need for an assistant, Mary has the need for an assistant.
   d. what Mary needs] the function mapping a situation such that s satisfies ‘the need for an assistant’ to \( \text{id}[\text{have}(\text{agent}(\text{s}), \text{d})]\)

(31) a. John found what Mary needs, an assistant
   b. ‘the finding of an assistant’ shares the same situations with’ the need for an assistant’
(32) a. John has what Mary needs, a car.
   b. the possession of a car – the need for a car: shared situations: situations in which the agent has a car.
(33) a. John gave Mary what she needed, a car.
   b. the gift of a car – the need for a car: shared situations: situations in which the agent has a car.

The semantic status of a need, a promise, etc.:
1. dependent on the Davidsonian event argument
(34) ‘what John needs’
   \[ \text{o}_{\text{prod}}(\exists \text{e} (\text{need}(e, \text{John, o}_{\text{prod}}(e)))] \]
Two functions mapping an event onto a product:
prod\(_1\): particular product
prod\(_2\): kind of product
2. need = have (a) need (Harves/Kayne, to appear)

(35) John needs = what John has a need for

(36) a. John has a need for a car.
   b. ∃e(have(John, e) & need(e, o) & car(o))