Goal: The aim of this study is to show that Japanese has scope marking constructions (SMC), which are attested in some languages such as German and Hindi.

Background: An example of SMCs in Hindi is given in (1). In SMCs, the matrix *wh*-phrase is used just as a signal for a direct question, which is so-called scope marker. As shown in (1)’s translation, it is the embedded *wh*-phrase ‘who’ that provides semantic content. According to Dayal (1994), (i) SMCs must have an embedded interrogative as shown in (2a) and (ii) the matrix verb in SMCs must be able to take [-WH] clause as illustrated in (2b). In addition, she suggests that SMC languages like German and Hindi have declarative counterparts of SMCs. In (3), the matrix object *yeh* appears to behave as an expletive like matrix *wh*-phrases in SMCs.

Japanese SMCs: I argue that Japanese examples in (4) are instances of SMCs. They each have two *wh*-phrases: the matrix *wh*-phrase ‘how’ and the embedded *wh*-phrase ‘whether’ or ‘why’. Note that the examples in (4) behave as a direct question of the embedded *wh*-phrase. In addition, Japanese SMCs show the two properties of SMCs observed by Dayal (1994). (5a) illustrates the first point (i): the embedded clause must be interrogative, and (5b) the second point (ii): it cannot be an SMC since the matrix verb ‘ask’ cannot take [-WH] clause. Moreover, Japanese also has declarative counterparts of SMCs like Hindi as shown in (6).

Syntactic analysis: Dayal (1994) argues that embedded *wh*-clauses in SMCs are selected by a matrix *wh*-phrase. Following this, I argue that the embedded question in Japanese SMCs is also selected by the matrix *wh*-phrase *doo* ‘how’. As shown in (7), *omow* ‘think’ cannot take an embedded interrogative without *doo* ‘how’, while it can when *doo* occurs after the embedded clause as seen in (4). This suggests that it is the matrix *wh*-phrase *doo* rather than the matrix verb *omow* that selects an embedded interrogative in Japanese SMCs.

Semantic analysis: Dayal (1994) proposes the indirect dependency approach to SMCs. Under this approach, a scope marker is treated as a true *wh*-phrase in contrast to McDaniel’s (1989) approach, where the scope marker is regarded as an expletive. Thus, SMCs like (1) consists of two *wh*-questions such as (8) and (9). The semantic representation of (1) is given in (10), in which the two *wh*-questions combine via functional application. Japanese SMCs can also be captured in the same way as Hindi’s. For example, (4a) consists of two *wh*-clauses like (11) and (12), and its semantic representation is shown in (13).

One major difference between Hindi and Japanese is a scope marker. Hindi scope marker is *kyaa* ‘what’, whereas *doo* ‘how’ is used in Japanese. Under the indirect dependency approach, the lexical difference of scope markers can be straightforwardly captured since scope markers in SMCs are a standard *wh*-expression used in a sentence like ‘what do you think?’ (cf. 8a and 11a). Thus, the lexical difference of Hindi and Japanese scope marker provides support for the indirect dependency approach.
(1) Hindi SMC: jaun kyaa soctaah hai [meri kis-se baatkaargi][?
  John what thinks Mary who-with will-talk
  ‘Who does John think Mary will talk to?’ (Dayal 1994)

(2) a. *jaun kyaa jaantaa hai [meri ravi-se baatkaargi][?
  John what knows Mary Ravi-with will-talk
  (Dayal 1994)

b. *jaun kyaa puuchhtaah hai [meri kis-se baatkaargi][?
  John what asks Mary who-with will-talk
  (Dayal 1994)

(3) Hindi: Sirf Hanna yeh soctaah hai [ki baarish ho rahii hai].
  only Hanna this thinks that rain happen-INF stay be.PRES.3sg
  ‘Only Hanna thinks that it rains.’ (Mycocck 2004)

(4) SMC: a. proyou [prowe Orinpikku-o mi-ni ik-u beki kadooka] doo omow-u?
  you we Olympic-ACC see-DAT go-PRES should whether how think-PRES
  ‘What do you think? Should we go to watch Olympic games.’

b. proyou [naze John-wa wakamono-ni ninki-ga aru no ka] doo omow-are-masu ka?
  you why John-TOP young people-DAT popular-NOM be C Q how think-HON-POL Q
  ‘What do you think? Why is John popular with young people?’

(5) a. *Kimi-wa [prowe Orinpikku-o mi-ni ik-u beki da to] doo omow-u no?[cf.2a)
  you-TOP we Olympic-ACC see-DAT go-PRES should COP C how think-PRES C

b. proyou [prowe Orinpikku-o mi-ni ik-u beki kadooka] doo tasuze-ta no? (cf.2b)
  you we Olympic-ACC see-DAT go-PRES should whether how ask-PAST C
  ‘What did you ask? Should we go to watch Olympic games?’

  ‘How did you ask whether we should take Reading & Research?’

(6) Boku-wa [prowe Orinpikku-o mi-ni ik-u beki da to] kou omotte-i-mas-u. (cf.3)
  I-TOP we Olympic-ACC see-DAT go-PRES should COP C this think-he-POL-PRES
  ‘I think that we should go to watch Olympic games.’

(7) *Kimi-wa [prowe Orinpikku-o mi-ni ik-u beki kadooka] omow-u?
  you-TOP we Olympic-ACC see-DAT go-PRES should whether think-PRES

(8) a. jaun kyaa soctaah hai? ‘What does John think?’
  b. λTλp∃q[T(q) & p = λw’ thinkw (j,q)]

(9) a. meri kis-se baatkaargi? ‘Who will Mary talk to?’
  b. λp∃x[p = λw will-talkw (mary,x)]

(10) a. [λTλp∃q[T(q) & p = λw’ thinkw (j,q)][(λp’∃x[p’ = λw will-talkw (mary,x)])
  b. λp∃q[∃x[q = λw will-talkw (mary,x)] & p = λw’ thinkw (j,q)]

  b. λTλp∃q[T(q) & p = λw’ thinkw (you,q)]

(12) a. Bokura-wa Olympic-o mi-ni ik-u beki? ‘Should we go to watch Olympic games?’
  b. λp’[p’ = λw should-go-to-watchw (we,O) ∨ p’ = λw¬ should-go-to-watchw (we,O)]

(13) λp∃q[q = λw should-go-to-watchw (we,O) ∨ q = λw¬ should-go-to-watchw (we,O)] &
  p = λw’ thinkw (you,q)]

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