A Semantic Analysis of the Preposition OVER[*]
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1. Introduction

So far, a number of semantic analyses of *over* have been presented (ex. Brugman (1981), Hawkins (1984), Lakoff (1987), Vandeloise (1990), Dewell (1994), Kreitzer (1997), Taylor (2002, 2003), Tyler and Evans (2003), Van der Gucht et al. (2007)). These are studies from cognitive semantic approach, and these analyses are imagistic in character. Especially, the radial network analysis of English *over* by Lakoff (1987) is now considered a key example of the cognitive semantic analyses of polysemy. In this paper Dewell (1994) is surveyed as introduction to previous studies in this field. This is because the analyses of the image-schema of the semicircular path and segment profiling Dewell (1994) offered capture senses of *over* more precisely than Lakoff (1987) and other previous studies. The purpose of this paper is: (i) to show that in using the preposition *over* trajectors and landmarks are captured three-dimensionally and topologically, (ii) to present a semantic analysis of the preposition *over* using the image-schema of the semicircular path, the image-schema transformation of segment profiling, and metaphor, and (iii) to provide the radial category showing the network relating each sense of the preposition over.

The target of discussion in this paper is on *over* as a preposition. As you know, *over* forms prefixes as in *overeat, overestimate, overflow, overrate*, etc. and *over* can be used as an adverbial particle like examples (1) and (2) below. But we will restrict our discussion to the semantics of a preposition: those usages are not at issue in this paper.

(1)   The fence fell *over*.
(2)   The game is *over*.

This paper will present a simpler and more intuitive analysis of the preposition *over* than Lakoff (1987), Dewell (1994) and other analyses.

2. A Previous Study: Dewell (1994)

A study on *over* by Lakoff (1987) is what is inspired by Brugman (1981). Although Brugman's (1981) and Lakoff's (1987) studies on *over* are very famous in cognitive linguistics, Dewell (1994) was trying to improve the Brugman/Lakoff's

analysis by relying more exclusively on image-schema transformations, and in fact, some of the ways to analyze *over* offered by Dewell (1994) are simpler and more intuitive than Brugman's and Lakoff's studies. Image-schema transformations proposed by Dewell (1994) include: segment profiling, resulting state, subjective path to endpoint, linear-extending trajector, edge-trajector, planar-extending trajector, multi-directional planar trajector, etc. In this section we will survey Dewell (1994) briefly.

2.1. The Central Schema and Segment Profiling

Although Brugman (1981) and Lakoff (1987) presume that the central schema for *over* is a combination of the stative location ABOVE and the boundary-traversing path of ACROSS, Dewell (1994) posits the semicircular path like Figure 1 as the central schema of *over*. In Figure 1, the path the trajector (TR) follows semi-encloses the landmark (LM).
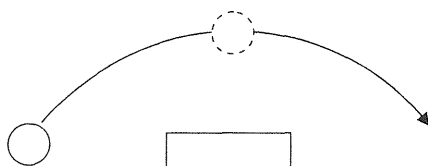
Figure 1   The central schema of *over* (Dewell (1994:353))

This "semicircular path" sense is reflected in *over* like sentence (3) below:

(3)   The dog jumped *over* the fence.   (Dewell (1994:353))

Dewell (1994) states that, if we take the arced path to be central, we can take the image schema seriously enough to account for all of the variants of *over* using natural image-schema transformations (or metaphorical applications of spatial senses to other domains). For example, Dewell (1994) suggests segment profiling as the most obvious image-schema transformation. Briefly speaking, segment profiling is what profiles segments of the path. First, look at examples (4a, b) below:

(4)   a.   The plane flew *over* the hill.   (Dewell (1994:352))
       b.   The bird flew *over* the yard.   (Dewell (1994:352))

Over in these sentences profiles the central region of the arc near the peak, illustrated in Figure 2.1. And the rest of the path (upward from the starting point and downward
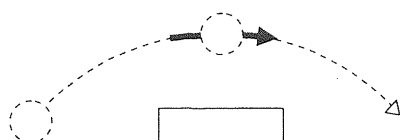
from the peak) is implicit pragmatically.

Figure 2.1   Profiled central region (Dewell (1994:355))

Also, according to Dewell (1994), *over* in sentence (5) below profiles the upward trajectory in Figure 1.   This *over* is illustrated in Figure 2.2.

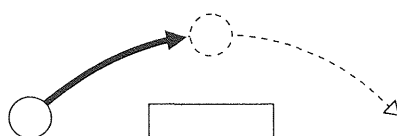(5)   The sun came up *over* the mountains.   (Dewell (1994:356))

Figure 2.2   Profiled upward trajectory (Dewell (1994:356))

In sentence (6), the downward trajectory of the semicircular path in Figure 1 is profiled.   This variant of *over* is illustrated in Figure 2.3.

(6)   Sam fell *over* the cliff.   (Dewell (1994:356))

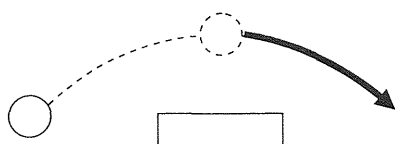Figure 2.3   Profiled downward trajectory (Dewell (1994:356))

Next, *over* in an example like (7) profiles the region of the peak of the semicircular path, shown in Figure 2.4.   Dewell (1994) states that this *over* retains the backgrounded sense of continued motion on a journey that will eventually lead to landing.

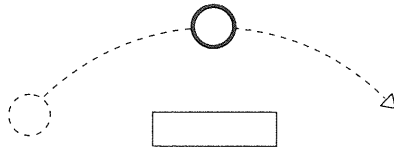(7)   The plane should be *over* Baltimore by now.   (Dewell (1994:357))

Figure 2.4   Profiled peak of the arc (Dewell (1994:357))

Over in (4)-(7), which we have so far observed, is involved with an image-schema transformation of segment profiling, in which part of the semicircular path is profiled.

Next, look at sentence (8).   In *over* like this, a TR is at an endpoint location which is reached after a physical movement.   Dewell (1994) describes an image-schema transformation like this as an image-schema transformation to a resulting-state, and illustrates this *over* in Figure 3.

(8)   Sam is *over* the bridge now.   (Dewell (1994:357))
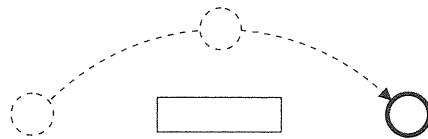
Figure 3   Resulting state: endpoint location (Dewell (1994:358))

On the other hand, *over* in (9) below does not suggest a physical movement; in (9) there is no suggestion that this is the path that Sam took to get to the endpoint. Dewell (1994) distinguishes between the sense of *over* in (8) and that of *over* in (9). Lakoff (1987) does not distinguish between *over* in (8) and *over* in (9).   In Lakoff's words, *over* in these corresponds to the image-schema transformation of "path focus ↔ endpoint focus."   According to Dewell (1994), the sense of *over* in (9) is involved with the image-schema transformation of a subjective path to endpoint, illustrated in Figure 4.   In this case, the speaker/interpreter traverses the OVER-path mentally.

(9)   Sam lives *over* the bridge.   (Dewell (1994:358))

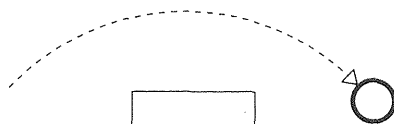Figure 4   Subjective path to endpoint (Dewell (1994:358))

2.2.   *Extending Paths*: *Linear-extending Trajectors*

According to Dewell (1994), in one reading of (10), the rope is not a holistic TR maintaining a constant shape as it moves entirely over the LM; it is an extending TR part of which stays at the starting location:

(10)   Sam threw the rope *over* the limb.   (Dewell (1994:359))

In this case, the focus is on the leading point of the TR.   The resulting shape of the whole extended TR corresponds (more or less) to the summarily scanned path taken by the leading point (Figure 5).

Figure 5   Linear-extending trajector (Dewell (1994:359))

Dewell (1994) calls such a path "extending-path," and calls an image-schema transformation like this "extending-path transformation."

Segment profiling also applies to the schema in Figure 5.   Look at examples below:

(11) a.   He leaned *over* the rail.   (Dewell (1994:359))
      b.   We stretched the rope *over* the yard.   (Dewell (1994:359))
      c.   We dropped the rope down *over* the edge.   (Dewell (1994:357))

Over in (11a-c) each corresponds to the left, middle, right schema in Figure 6:
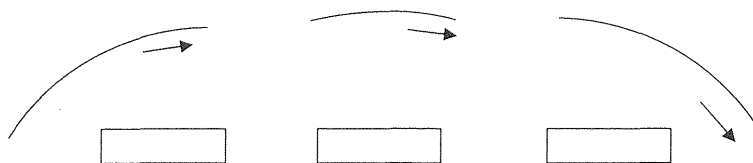
Figure 6   Profiled linear-extending trajector (Dewell (1994:359))

2.3. A Three-dimensional Conception

Consider sentence (12). In Dewell's (1994:362) words: "A vantage point above the TR reveals its linear shape as an edge extending horizontally and perpendicular to the OVER-path. In effect, each point in the TR may be seen as tracing its own OVER-arc ⋯."

(12)   A line of soldiers marched *over* the ridge.   (Dewell (1994:362))

According to Dewell (1994), the image-schema for *over* in (12) is three-dimensional, and the image-schema for *over* like this is shown as in Figure 7:

Figure 7   Edge-trajector (Dewell (1994:362))

Next, look at sentence (13) below:

(13)   He draped the sheet *over* the clothesline.   (Dewell 1994:363))

Figure 8   Planar-extending trajector (Dewell (1994:363))

According to Dewell (1994), the edge-TR image of Figure 7 can be transformed naturally into an image like that of Figure 8.   Sentence (13), for example, can be read

as a planar TR extending so that its leading edge moves uniformly over the LM.
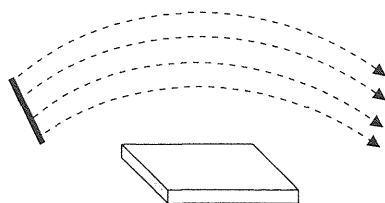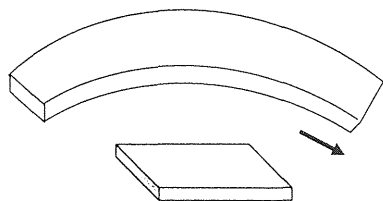
Next, look at (14a, b) below:

(14) a.   She poured the syrup out *over* the pancakes.   (Dewell (1994:363))

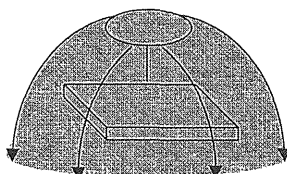   b.   He spread the cloth out *over* the table.   (Dewell (1994:363))

Figure 9   Multi-directional planar TR (Dewell (1994:364))

Dewell (1994) states that sentence (14a) describes a situation in which a fluid moves outward in several directions at once.   (14b) is essentially the same image.   Figure 9 represents a planar TR with an edge which extends outward in multiple directions at once, ultimately semi-enclosing the LM in at least one of those directions.   This schema is essentially a curved-edge variant of the schema for planar-extending TRs (Figure 8), profiling the downward arc.

3.   Problems in Dewell (1994)

The last section introduced basic part in the study of Dewell (1994).   In this section we will point out problems in Dewell's (1994) study.

Problem (i) — two-dimensional/three-dimensional image-schemas of *over*:

Dewell (1994) gives image-schemas of *over* two-dimensional/three-dimensional distinctions.   But the distinction like this is not needed as Ando (2007) has pointed out.   Because this is the matter involving the spatial-cognitive ability of the subject, we should understand the sense of *over* three-dimensionally.   Therefore, the image-schema of *over* should be captured three-dimensionally (cf. Van der Gucht et al. (2007)).   As what endorses this idea, Lakoff and Johnson (1999:31-32) states that a container schema can be instantiated as bounded region in space.[1]   This statement suggests that a container schema is captured three-dimensionally.   Thereby, we should assume that the image-schema of *over* is structured three-dimensionally.

Problem (ii) — radial category:

Dewell (1994) states that, if we take a semicircular path to be the central schema of *over*, we can account for the interrelation of all spatial senses only by means of

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[1] A container schema is a kind of image-schema, and has the structure of an inside, a boundary, and an outside (see Lakoff and Johnson (1999:32, 380)).

image-schema transformations (and metaphorical applications of spatial senses to other domains). However, he does not argue that senses of *over* form the radial category, as Lakoff (1987) does. As Lakoff (1987) shows the radial category of senses of *over*, how each sense of *over* is interrelated will need to be presented.[2]

4. Proposal

This paper employs the idea of the central schema of the semicircular path and segment profiling proposed by Dewell (1994). The purpose of this section is to present a more natural and intuitive analysis of *over*, using the semicircular path and segment profiling, than Lakoff (1987), Vandeloise (1990), Dewell (1994), Kreitzer (1997), Tyler and Evans (2003) and other previous studies. To accomplish the purpose, first, we will set up next working hypotheses.

(15) Working hypotheses
   a.   TRs and LMs are captured three-dimensionally, and the shape and size are expandable and reducible topologically.
   b.   Contact/non-contact between a TR and a LM is neutral; that is, whether or not a TR is contact with a LM is not involved with a sense of over.
   c.   In an image-schema transformation of segment profiling, the suggestion is neutral that the TR moves actually along the backgrounded part of the path.
   d.   We recognize metaphor in the sense of Lakoff and Johnson (1980, 1999) and Lakoff (1987, 1993).

Below, I will present a semantic analysis of the preposition *over* on the basis of the working hypotheses (15a-d).

(A)   Central Schema

We will posit the central image-schema of *over* as the semicircular path, as is shown in Figure 10 below. In Figure 10, a TR moves along the semicircular path parabolically, and no part of the path is not profiled. This figure is similar to Dewell's (1994) study. But, as shown in working hypotheses (15a, b), TRs and LMs are captured three-dimensionally, and the shape and size are expandable and reducible topologically. In this case contact/non-contact between a TR and a LM is neutral, and is not involved with a sense of *over*.

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[2] Tyler and Evans (2003:80) have proposed the semantic network of *over*.
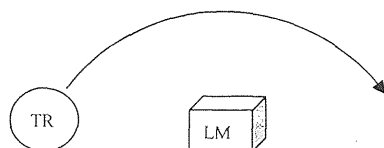
Figure 10   The central image-schema of *over*

Sentences (16)-(23) below are examples of *over* in this sense.   Action verbs of movement are often used with *over* in this sense.

(16)	The dog jumped *over* the fence.	(= (3))
(17)	Sam drove *over* the bridge.	(Lakoff (1987:422))
(18)	Sam walked *over* the hill.	(Lakoff (1987:422))
(19)	Sam climbed *over* the wall.	(Lakoff (1987:422))
(20)	The rabbit hopped *over* the fence.	(Tyler and Evans (2003:79))
(21)	She threw the rope *over* the limb.[3]	(= (10))
(22)	A line of soldiers marched *over* the ridge.[4]	(= (12))
(23)	He draped the sheet *over* the clothesline.	(= (13))

Although the image-schema of *over* in (21)-(23) is treated as distinct from that of *over* in (16)-(20) in Dewell (1994), because the shape and size of TRs are expandable and reducible topologically as we saw in a working hypothesis (15a), the image-schema of *over* in (21)-(23) should be the same as that of *over* in (16)-(20).

(B)   Segment profiling

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[3] Dewell (1994), calling a TR in an example like (10) "linear-extending trajector," distinguishes between the TR in (10) and that in (3).   But this distinction should not be needed for reasons (a)-(c) below:
  (a)   Linear-extending is the physical nature of TRs, that is, linear-extending is not involved with meanings of *over*.
  (b)   Because the leading point of the rope moves along the semicircular path, the analysis that the leading point of the rope is active zone will be correct (cf. Taylor (2002:110-111))
  (c)   Although Figure 5 is illustrated as the image-schema of *over* in (10) by Dewell (1994), but Figure 5 should be what illustrates the state after the rope hung on the limb; that is, Figure 5 is never an image-schema in cognitive psychology.
Thus, the nature of linear-extending is not involved with the image-schema of *over*.   We should say this: *over* in (10) reflects the central schema of the semicircular path.
  [4] As we saw in the last section, Dewell (1994) distinguishes *over* in (10)-(11) from *over* in (12)-(14) on the basis of the idea of whether the shape of TRs is linear or planar.   But, can it be true that the shape of TRs is involved with meanings of *over*?   Although Dewell (1994) proposes "edge-trajector" for explaining the planar shape of the TR of (12), but, as Ando (2007) too points out, we should consider a line of soldiers as a single individual.   By thinking like this the meaning of *over* in (12) should be the same as that of *over* in (3).

This paper employs segment profiling: the image-schema transformation of profiling part of the semicircular path.[5]   But the segment profiling used here is not the same analysis as Dewell's (1994):   although Dewell (1994) treats *over* in an example like (7) as profiling the region of the peak at the semicircular path, we will not accept this analysis.   This paper does not treat *over* in an example like (7) as the profiled peak of the arc, but analyzes *over* like this as profiled central part of the arc, as in (B.1) below.

(B.1)   Profiled central part of the semicircular path

Look at examples (24)-(27) below.   *Over* in these examples profiles central part of the semicircular path.

(24)	The plane flew *over* the hill.	(= (4a))
(25)	The bird flew *over* the yard.	(= (4b))
(26)	We stretched the rope *over* the yard.	(= (11b))
(27)	Lissa just tapped the golf ball, but it still rolled *over* the cup.	

(Tyler and Evans (2003:83))

The sense of *over* in these examples can be shown like Figure 11.1 below.
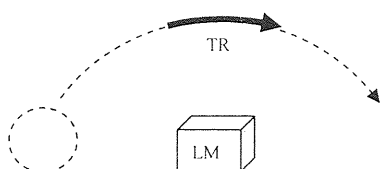
Figure 11.1   Profiled central region

The dotted line in this Figure 11.1 represents the backgrounded part of the path.   As is stated in (15c), whether or not the TR moves actually along this part is neutral.

(B.2)   Profiled upward part of the semicircular path

Look at examples (28)-(29) below.   *Over* in these examples profiles upward

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[5] Dewell (2007) states that the core of *around*'s meaning is circular motion, as in (i) below. Also, he states that in examples (iia, b) below a semicircular path is profiled.   This view corresponds to segment profiling.

(i)		She walked *around* the table.	(Dewell (2007:384))
(ii)	a.	She drove *around* the pothole.	(Dewell (2007:385))
	b.	She disappeared *around* the corner.	(Dewell (2007:385))

part of the semicircular path.

(28)   The sun came up *over* the mountains.   (= (5))

(29)   The plane climbed high *over* the city.   (Dewell (1994:356))

The sense of *over* in examples like these can be shown like Figure 11.2 below.

Figure 11.2   Profiled upward trajectory

The dotted line in this Figure 11.2 represents the backgrounded part of the path.   As is stated in (15c), whether or not the TR moves actually along this part is neutral.

(B.3)   Profiled downward part of the semicircular path

      Look at examples (30)-(34) below.   *Over* in these examples profiles downward part of the semicircular path.

(30)   Sam fell *over* the cliff.   (= (6))

(31)   We dropped the rope down *over* the edge.   (= (11c))

(32)   He leaned *over* the rail.[6]   (= (11a))

(33)   He stumbled *over* a stone.

(34)   Bill: "Mum!   Joe tripped me up with his hoot."

            Joe: "No, I didn't, Mum.   Bill just tripped *over* my foot."

(Radden and Dirven (2007:24))

The sense of *over* in examples like these can be shown like Figure 11.3 below.

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[6] In footnote 5 we observed: with examples like (10) and (11) we should not recognize linear-extending trajectors.   Even if we recognized linear-extending trajectors, *over* in (11a) should profile not the upward trajectory of the path but the downward trajectory: that is, the image-schema of *over* in (11a) should be the same as that of *over* in (11c).   Dewell, in the relevant paper, describes *over* in (11a) should profile the upward trajectory of the path.   Because Dewell (1994) wanted to present an example profiling the upward trajectory of the path, he would have described *over* in (11a) as profiling the upward trajectory.
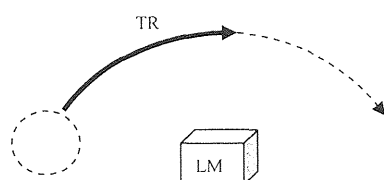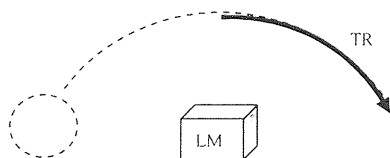
Figure 11.3   Profiled downward trajectory

The dotted line in this Figure 11.3 represents the backgrounded part of the path.   As is stated in (15c), whether or not the TR moves actually along this part is neutral.

(B.4)   Profiled endpoint of the semicircular path

Look at an example (35) below.   *Over* in this example profiles the endpoint of the semicircular path.

(35)   Sam is *over* the bridge now.   (= (8))

The sense of *over* in an example like this can be shown like Figure 11.4 below.
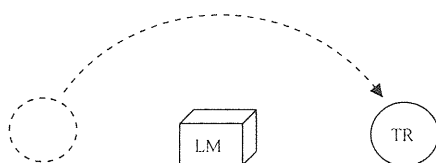
Figure 11.4   Profiled endpoint location

The dotted line in this Figure 11.4 represents the backgrounded part of the path.   As is stated in (15c), whether or not the TR moves actually along this part is neutral.   As we will see later, *over* in this case suggests actual movement.

(B.5)   Profiled endpoint of access path

Look at examples (36)-(38) below.   According to Dewell (1994), examples (36)-(38) profile the endpoint reached after subjective motion.   In these examples there is no suggestion that actual physical movement occurred.   In *over* in examples like these, the speaker/interpreter mentally traces along the path by the cognitive operation of the mental scanning.

(36)   Sam lives *over* the bridge.   (= (9))
(37)   Sausalito is *over* the bridge.   (Lakoff (1987:424))

(38)   The mansion is situated *over* that wall.   (Tyler and Evans (2003:82))

The sense of *over* in examples like these can be shown like Figure 11.5 below. Because *Sam*, *Sausalito*, and *the mansion* in (36)-(38) do not move actually, the line of the semicircular path in Figure 11.5 is finer than that of the semicircular path in Figure 11.4.
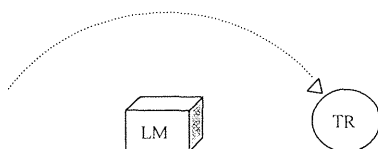
Figure 11.5   Profiled endpoint of access path

Path expressions like these Talmy (1996, 2000) and Matsumoto (1996) call access path. According to Lakoff (1987), *over* as in these examples has the sense of "on the other side of" as a result of end-point focus, corresponding to profiled endpoint.   But this paper distinguishes between *over* in (35) and *over* in (36)-(38).   Linguistic evidence for this distinction is below:

(35')   Sam is *safely over* the bridge now.

In (35') above, actual movement is suggested.   In fact, in this sentence *safely* is used. This sentence (35') profiles the endpoint of the path; this sentence is not involved with subjective motion.
    A phenomenon like this in *over* is observed in *across* and *through*, too.

(39)   The child hurried *across* the street.   (Langacker (1999:301))
(40)   The child is safely *across* the street.   (Langacker (1999:301))
(41)   Last night there was a fire *across* the street.   (Langacker (1999:301))

According to Langacker (1999), sentence (39) profiles objective movement.   *Across* in (40) shows static location resulting from actual movement.   In *across* in (41) no physical movement is suggested at all.   *Across* in this (41) profiles the endpoint as goal reached after mentally following the path by means of the mental scanning. Since the distinction is made between *across* in (40) and *across* in (41), it would be better to distinguish *over* in (35) and *over* in (36)-(38).   The same is true of *through*.

(42)   The train rushed *through* the tunnel.   (Lee (2001:39))

(43)   Tom is safely *through* the tunnel now.

(44)   My office is located just *through* that door.

<div align="right">(Tyler and Evans (2003:222))</div>

Through in (42) represents actual physical movement.   *Through* in (43) shows the location resulting from actual movement of the TR (i.e. Tom).   *Through* in (44) suggests no actual movement.   This *through* in (44) should be analyzed as profiling the endpoint as goal reached after the speaker's/interpreter's following the path mentally.

From what we have seen, we can say: we should distinguish between *over* in (35) and *over* in (36)-(38).

(C)   Above Sense

Over has the sense of following no path.   Look at (45)-(50) below.   For sentences like these Tyler and Evans (2003) state: it does not seem possible to form an interpretation in which the TR is following a trajectory.   Thus, we should assume: in these examples the TR is located physically above the LM, and the semicircular path is excluded.   Also, we can say: *over* in this case is involved with an image-schema transformation of the central image-schema (A).   And the image-schema transformation is this: the peak of the semicircular path is profiled, and the rest of the semicircular path is excluded.   The sense of *over* in examples like these can be shown like Figure 12.

(45)   Hang the painting *over* the fireplace.   (= (15b))

(46)   The helicopter is hovering *over* the hill.   (Lakoff (1987:425))

(47)   The helicopter hovered *over* the city.

<div align="right">(Brugman (1981:40), Tyler and Evans (2003:75))</div>

(48)   The picture is *over* the mantel.   (= (15a))

(49)   The lamp hangs *over* the table.   (Taylor (2003:113))

(50)   The clothesline is suspended *over* the yard.   (Dewell (1994:360))

Figure 12

According to Lakoff (1987), *over* in the case like this is roughly equivalent in meaning to *above*. But *over* in the case of (51) is not interchangeable with *above*.

(51) a.   There are birds somewhere *above* us.   (Kreitzer (1997:308))

     b. * There are birds somewhere *over* us.   (Kreitzer (1997:308))

(52) a.   Nora twirled *over* the polished floor. (Tyler and Evans (2003:112))

     b.   Nora twirled *above* the polished floor. (Tyler and Evans (2003:112))

Also, (52a) and (52b) are different in meaning. According to Tyler and Evans (2003), in (52a) the TR (Nora) is in contact with the LM (the polished floor), whereas in (52b) the TR is not in contact with the LM. In (52b) one possible interpretation is that the TR, *Nora*, refers to some fantastical creature, perhaps a fairy, capable of dancing in the air without actually touching the floor. These examples (51) and (52) suggest *over* is not equivalent in meaning to *above* completely. Although Taylor (2003) states in *over* in this sense the TR is not in contact with the LM, there is an example like (52a) in which the TR is in contact with the LM.

(D)   Covering Sense

     Look at examples (53)-(57) below. The sense of *over* in (53)-(57) should be the sense of "covering." Although Lakoff (1987) treats this *over* as a variant of "Above Sense," Taylor (2003) and Tyler and Evans (2003) recognize "covering" as one independent sense in *over*. This "covering sense" will be what has transformed the central image-schema of the semicircular path. In this sense of *over* the TR is continuous.

(53)   The board is *over* the hole.   (Lakoff (1987:427))

(54)   They laid a board down *over* the hole.   (Dewell (1994:367))

(55)   He spread the cloth out *over* the table.[7]   (= (14b))

(56)   The tablecloth is *over* the table.   (Tyler and Evans (2003:91))

(57)   She poured the syrup out *over* the pancake.   (= (14a))

Let us observe examples of *over* which has the sense of "covering" evidently. In examples (58)-(62) below, the locational relation between the TR and the LM has nothing to do with the vector of actual up-down. From these examples, again, we should conclude: *over* has the sense of "covering."

---

[7] In my view, *over* in (14a, b) indicates the 'covering' sense. Dewell (1994) does not recognize the 'covering' sense as an independent sense in *over*. We should recognize the 'covering' sense as an independent sense of *over*.

(58)	She put the coat on *over* her dress.	(Dewell (1994:368))
(59)	She held her hands *over* her eyes.	
(60)	He hung a curtain *over* the picture.	
(61)	They put a transparent plastic sheet *over* the painted ceiling of the chapel during repairs.	(Tyler and Evans (2003:91))
(62)	He put his hands *over* his face.	(Taylor (2003:114))

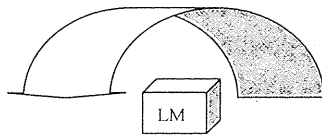The sense of *over* in examples like (53)-(62) can be shown like Figure 13 below.

Figure 13

(E) Metaphorical Senses

(E.1) Metaphorical Sense I: 'Control'

Look at examples below:

(63)	She has a strange power *over* me.	(Lakoff (1987:435))
(64)	I have no control *over* what he does.	
(65)	He has no authority *over* me.	(Taylor (2003:115))
(66)	He rules *over* a large kingdom.	(*LDCE*^{3})
(67)	Henry VIII reigned *over* England from 1509 to 1547.	

As Lakoff and Johnson (1980) and Lakoff (1987) argue, *over* like these is what is extended metaphorically from 'Above Sense.' Metaphor of this kind is: "HAVING CONTROL or FORCE IS UP; BEING SUBJECT TO CONTROL or FORCE IS DOWN". This is why *over* like (63)-(67) is extended metaphorically from 'Above Sense' in (C). This paper will call *over* like this Metaphorical Sense (I): 'control.'

(E.2) Metaphorical Sense II: 'Time'

Look at a sentence below:

| (68) | The festival will take place *over* the weekend. | |
| | | (Tyler and Evans (2003:88)) |

The sense of *over* in (68) above will be what is extended metaphorically from the sense of *over* reflecting the central image-schema (A). The kind of this metaphor will be "TIME IS SPACE" (cf. Lakoff and Johnson (1980). Sweetser (1990)). In (68), for example, *the weekend* (LM) corresponds to an entity in space, and *over*'s time sense is extended metaphorically. This sense of *over* is involved with (A), and is not extended from (B)-(D).

As a phenomenon similar to *over*, let us observe the preposition *through*. The preposition *through* has two senses. One is 'Space Sense': *across an area (LDCE[5])*. The other is 'Time Sense': *from the beginning to the end point of an activity, situation or period of time (OALD[8])*.

(69)   The burglar got in *through* the window.   (*OALD[6]*)

(70)   Sometimes I go to bed at 5 a.m. and sleep right *through* the day.

                                                                    (*LDCE[3]*)

'Time Sense' of *through* as in (70) will be what is extended from 'Space Sense' of *through* as in (69).

(E.3) Metaphorical Sense III: 'Means'
        Observe sentences below:

(71)   We talked about it *over* the telephone.

(72)   Yesterday I heard the news *over* the radio.

(73)   A message came *over* the loudspeaker.

Over in these examples indicates the sense of 'means.' This sense of *over* will be what is extended metaphorically from the sense indicated by (A). We will state this: The kind of this metaphor is conduit metaphor by Reddy (1979) (as to conduit metaphor, Lakoff and Johnson (1980) have employed it, and Lakoff (1993) has described the significance of that study). The sense of *over* is not what is extended from (B)-(D).

In this section we have seen distinct senses in the preposition *over*: (A)-(E). Now, I will assert: the preposition *over* forms the radial category where (A) is central, as is shown in:
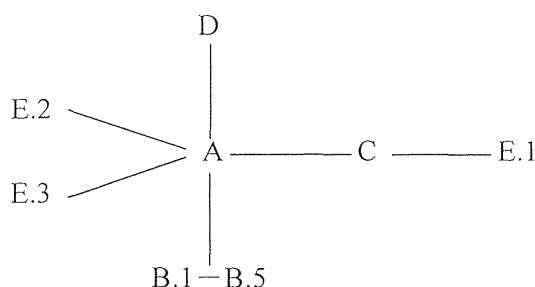
```
                    D
                    |
    E.2  ╲          |
          ╲         |
           ╲  A ————————— C ————————— E.1
          ╱         |
    E.3  ╱          |
                    |
               B.1 ─ B.5
```

Figure 14   The radial category of preposition *over*

5. Concluding Remarks

This paper has discussed senses of the preposition *over*.   In this paper we saw the preposition *over* has distinct senses of (A), (B.1), (B.2), (B.3), (B.4), (B.5), (C), (D), (E.1), (E.2) and (E.3) and forms the radial category where (A) is central.   By employing the semicircular path and segment profiling in Dewell (1994), this paper has presented a more natural semantic analysis of the preposition *over* than previous studies done so far.

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