**THEMATIC PARALLELS AND NON-PARALLELS: CONTRIBUTIONS OF FIELD-SPECIFIC PROPERTIES***

*Seizi Iwata*

Abstract. The purpose of this paper is to demonstrate, following Jackendoff (1992), that parallelism across semantic fields is constrained by properties specific to each field, and that these field-specific properties play a crucial role in accounting for the non-parallels which particular lexical items exhibit across semantic fields.

Three semantic fields (Temporal, Possessional, and Identificational) are shown to have different properties with respect to three parameters, dimensionality, directedness and continuousness. These differing, field-specific properties account for where parallelism obtains and where its does not.

The examination of field-specific properties reveals a number of cross-field behavioral differences that have received little recognition, as shown by case studies of *spread, between, over, and extent verbs.*

1. Introduction

This paper expands on Jackendoff’s (1992) insight that parallelism across semantic fields is constrained by properties specific to each field and demonstrates that these field-specific properties are relevant in accounting for non-parallels that particular lexical items exhibit across fields and which might otherwise appear to be arbitrary and idiosyncratic.

This paper is organized as follows: Section 2 reviews Jackendoff’s (1992) claim concerning his Thematic Relations Hypothesis and points out the relevance of his insight to the way both parallels and non-parallels obtain across semantic fields. Section 3 examines three semantic fields (Temporal, Possessional, and Identificational) with respect to three parameters: dimensionality, directedness and continuousness. Section 4 shows how these different, field-specific properties account for both parallels and non-parallels across fields via case studies of *spread, between, over* and extent verbs like *go* as in *This road goes from Denver to Indianapolis.*

While the discussion centers around Jackendoff’s thematic relations, it also directly bears on metaphor studies and polysemy analyses conducted

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within the Cognitive Linguistics Circle, as can be easily seen in the case studies of section 4.

2. Thematic Parallels

2.1. Thematic Relations Hypothesis
It has often been noted that many grammatical patterns used to describe physical objects in space also appear in expressions that denote non-spatial domains. Thus the verb *go* may express a change of location as in (1a), a change of possession as in (1b), or a change of property as in (1c).

(1) a. The bird went from the ground to the tree.  
   b. The inheritance went to Philip.  
   c. The light went from green to red.

Jackendoff’s (1983, 1990) *Thematic Relations Hypothesis* or TRH accounts for the paradigm in (1) by claiming that the sentences in (1) are all realizations of the GO-function. Jackendoff states:

the concepts they express are all specialized forms of the general concept \[\text{GO}(X, P)\], which represents the motion of some object \(X\) (the theme) along some path \(P\).  

(Jackendoff 1987:152)

Consequently, the sentences in (1) are represented as in (2), where GO is subscripted with the field modifier Spatial, Possessional, or Identificational.

(2) a. \[\text{GOSpat} ([\text{BIRD}], [\text{FROM GROUND TO TREE}])\]  
   b. \[\text{GOPoss} ([\text{INHERITANCE}], [\text{TO PHILIP}])\]  
   c. \[\text{GOIdent} ([\text{LIGHT}], [\text{FROM GREEN TO RED}])\]

While the parallelism between spatial and non-spatial concepts hardly seems controversial, there is an important point which has received relatively little attention in the discussion, namely, that it is not full parallelism. Spatial and non-spatial concepts are not entirely parallel; one cannot just blithely speak of parallelism. An adequate theory must account for non-parallel aspects as well.

Jackendoff (1992, 1996a), in discussing how his TRH differs from metaphorical extension, accounts for the absence of full parallelism. Taking up possessional concepts as an example, Jackendoff claims that the parallelism between spatial and possessional concepts is the result of three independent factors: the conception of physical space and of objects being located in it, the notion of possession, and an abstract organizing system. Spatial and possessional concepts are obtained by applying an abstract organizing system to the notion of space and that of possession, respectively, as in Figure 1.

Possessional concepts are partially parallel to spatial concepts, but not entirely so,
because the notion of location in physical space ranges over three continuous orthogonal degrees of freedom, whereas what we might call ‘possessional space’ ranges over the discontinuous unstructured set of individuals. (Jackendoff 1992:65)

That is, each semantic field has its own particular properties, thereby preventing a full parallelism.¹

All this suggests the need to recognize the factor of field-specific properties. Although this factor tends to be left out of the discussion in the literature, it constitutes an essential part of thematic parallels. The different uses of the verb go, stock examples of thematic parallelism, are obtained as shown in Figure 2.

Given that field-specific properties constrain the parallelism, then, the primary object of study should be each semantic field rather than their parallelism. In what follows, I will examine how three semantic fields (Temporal, Possessional, and Identificational) are structured, and show that field-specific properties account for both thematic parallels and non-parallels.

2.2. Metaphorical Mapping

Before starting, however, a word is in order about a Lakovian theory of metaphor, in fairness to Lakoff, for Lakoff (1992) has recently said that

¹ Prof. Masa’aki Yamanashi commented that if the concepts of possession do not come from spatial concepts, this begs the question where they ultimately come from. Jackendoff (1992) argues that some parts of the concepts of possession are learned from observation or instruction, while some parts are innate:

But, as I am continuing to emphasize, the fundamental relation of possession and the fundamental notion of a right cannot be learned from observation or instruction – they have to be available innately in the Conceptual Well-Formedness Rules in order to be on the one hand culturally universal and on the other hand culturally modulated. (Jackendoff 1992:66)
his theory of metaphorical mappings is not committed to a derivational view.

Lakoff maintains that mappings should not be understood as algorithmic processes that ‘start’ with source domain structure and wind up with target domain structure.

Such a mistaken understanding of mappings would lead to a mistaken understanding of the Invariance Principle, namely, that one first picks all the image-schematic structure of the source domain, then one copies it onto the target domain unless the target domain interferes. (Lakoff 1992:215)

Instead, mappings should be understood in the mathematical sense, that is, as a set of static correspondences across domains.

According to Lakoff, therefore, metaphorical mappings do not create concepts. To say that the image-schematic structure is preserved in a mapping simply means that the source domain properties are consistent with the preexisting image-schematic structure in the target domain.

A corollary of the Invariance Principle is that image-schema structure inherent in the target domain cannot be violated, and that inherent target domain structure limits the possibilities for mappings automatically. (Lakoff 1992:216)

Notice that if one substitutes ‘field-specific properties of the target domain’ for ‘inherent target domain structure’, the above passage comes to say almost the same thing as the TRH, namely, that field-specific properties constrain the parallelism. (Cf. Turner 1993, Iwata 1995b, Rudzka-Ostyn 1996).

This suggests that Jackendoff’s TRH and Lakoff’s theory of metaphor may not be as different as Figure 1 would have us believe, and that the two approaches may well eventually converge.

At the same time, however, this convergence creates two major problems for a Lakovian theory of metaphor. First, the claim that non-spatial concepts are learned on the basis of spatial or bodily concepts has been essential to experientialism (Lakoff 1987, Lakoff & Turner 1989). To say that mappings are not derivations entails the abandonment of this philosophical stance.
Second, it is rather doubtful whether Lakoff truly abandons a derivational view of mappings. Despite Lakoff’s claim cited immediately above, a derivational view is discernible in his metaphorical analyses. A good illustration comes from Lakoff’s analysis of time, part of which goes as follows:

Mapping:
Times are things.
The passing of time is motion.
Future times are in front of the observer; past times are behind the observer.
One thing is moving, the other is stationary; the stationary entity is the deictic center.

Entailment:
Since motion is continuous and one-dimensional, the passage of time is continuous and one-dimensional. (Lakoff 1992:217)

Notice that in the ‘entailment’ part, Lakoff says that the passage of time is continuous and one-dimensional because motion is so. But motion’s being continuous and one-dimensional does not constitute a logical reason for the passage of time being so. Strictly, the passage of time being continuous and one-dimensional is an inherent property of the target domain concept, quite independent of the source domain concept (i.e. motion). Since mappings are no more than ‘a set of static correspondences’, the two domains cannot be causally related.

In other words, Lakoff’s analysis of time amounts to saying exactly what he rejects as a mistaken understanding of the Invariance Principle, namely ‘that one copies the image-schematic structure of the source domain onto the target domain’ (Lakoff 1992:215).

I am not sure whether scholars committed to the Invariance Principle are fully aware of the severity of these problems. But after Lakoff (1992), a non-derivational view of mappings has become a premise for subsequent metaphor studies (Lakoff 1993a, 1993b, Turner 1993, Rudzka-Ostyn 1996, Grady 1997), suggesting that this is the right direction for a Lakovian theory of metaphor.

Thus the convergence of the TRH and a Lakovian theory of metaphor is possible, at least in principle. In this sense, the ensuing discussion is compatible with a theory of metaphor as well as with the TRH.²

² In this paper I have chosen Jackendoff’s thematic relations as the object of study out of my wish to pay homage to Jackendoff (1992), which initially aroused my interest in this topic. In a sense, 2.2 serves to make sure that Jackendoff, rather than Lakoff, is to be credited with the idea that field-specific properties constrain the parallelism. But apart from this point, the insight behind the present analysis can be easily accommodated within Lakoff’s approach.
3. Non-spatial Semantic Fields

3.1. Temporal

Clark (1973:49) makes insightful observations concerning how the temporal domain is structured. First, time is one-dimensional and thus ought to be described using one-dimensional spatial terms as in (3).3

(3) Time was short. The day has been long. The end of the world is near. Monday seems so far away.

Second, time is asymmetrical or directed. Therefore, time ought to be described with one-dimensional relational prepositions which are also asymmetrical.

(4) before, after, ahead, behind, in front, in back, etc.

Third, Clark (1973:50) notes that we humans are seen in one of two ways with respect to the time ‘highway’: either (1) we are moving along it, with future time ahead of us and the past behind us; or (2) the highway is moving past us from front to back. The two conceptions, which are called the moving ego and moving time metaphors, are exemplified in (5) and (6), respectively. (For similar observations, see Fillmore 1975, Miller & Johnson-Laird 1976, Lakoff 1990, 1992, Lakoff & Johnson 1980, Lakoff & Turner 1989, Radden 1995, Traugott 1978, among others).

(5) Trouble lies ahead. The worst of it is behind us. We are just coming into troubled times. I look forward to Monday. John will be here from Monday on(ward).

(6) Noon crept up on us. Friday arrived before we knew it. Thursday rushed by. Time flew by.

Based on these observations, I claim that the temporal field is structured as shown in Figure 3.

Besides being conceived of as a line extending from the past to the future, time also possesses the characteristic of flowing incessantly from the past to the present to the future. We humans are located on the time flow, with our front-back orientation corresponding to the future-past orientation, and are thereby conveyed in the direction of future.4

3 An apparently problematic case is down as in (i).

(i) from the Middle Ages down to the present

However, this expression does not prove that time has a vertical dimension. This sense of down seems to be based on the conceptualization of time as a flow in a river, which has been superimposed on time as a line. Up the river and down the river designate the directions of its source and its end, respectively, rather than locations in a vertical dimension.

4 The conceptualization of time as linear seems to be universal. Comrie (1985:5) argues:

Moreover, even in societies that have a cyclic concept of time, the individual cycles seem to be viewed as chronologically arranged, i.e. there are earlier and later cycles, so that at best the cyclicity would be superimposed on an overall conceptualization of time that is linear.
The model in Figure 3 automatically accounts for the one-dimensionality and the directionality of time. It also accounts for the moving ego and the moving time metaphors. Several scholars have argued that the moving ego and moving time metaphors reflect the two alternate ways available for construing physical movement (Clark 1973, Miller & Johnson-Laird 1976, Radden 1995, among others). When a person moves from one place to another, he can conceive of his journey in two ways: either he travels through a landscape that is stationary relative to his movement, or else he remains conceptually stationary while the landscape travels past him. For instance, suppose I am on the Hikari Super Express bound for Osaka. As the train is coming near Kyoto, I may utter either (7a) or (7b) (Figure 4).

(7) a. We’re approaching Kyoto.
   b. Kyoto is approaching.

Now consider (8), where (8a) is an instance of moving ego and (8b) one of moving time (Figure 5).

(8) a. We’re approaching Christmas.
   b. Christmas is approaching.

The clear parallelism between (7) and (8) can be accounted for by saying that the two distinctive modes of conceiving movement are available in the Temporal field as well as in the Spatial field.5

5 This does not mean that the two movements in the Temporal field exactly parallel those in the Spatial field. Yukio Hirose (personal communication) pointed out that perfect aspect and some adverbial modifiers are acceptable with the passage of time as in (i) but not with physical movement as in (ii).
Moreover, other aspects of time also follow from Figure 3. If we locate a point on the time line in relation to the ego, the future is in front of the ego, and the past behind the ego.

(9) In the weeks *ahead* of us . . . (future)
   That’s all *behind* us now. (past)  
   (Lakoff & Johnson 1980:41)

If, on the other hand, we assess the relative position of two points on the time line, then the past comes before the future.

(10) In the *following* weeks . . . (future)
   In the *preceding* weeks . . . (past)  
   (Lakoff & Johnson 1980:41)

The two conceptualizations can mix with no ill effects.

(11) We’re looking *ahead* to the *following* weeks.  
   (Lakoff & Johnson 1980:41)

Now there is another essential conceptualization structuring the temporal field, which is illustrated in (12).

(12) a. The meeting is at 6:00.
    b. We moved the meeting from Tuesday to Thursday.
    c. Despite the weather, we kept the meeting at 6:00.  
    (Jackendoff 1983:190)

(i) a. Christmas is coming soon.
    b. Christmas has come.
    c. Christmas is fast approaching.

(ii) a. *Kyoto is coming soon.
    b. *Kyoto has come.
    c. *Kyoto is fast approaching.

But these contrasts do not negate the parallelism between physical and temporal movements *per se*. Adverbial modification as in (iic) may be difficult, but not impossible. (iii) seems to be acceptable.

(iii) Kyoto is rapidly approaching.

The contrasts in (i) and (ii) seem to be attributable to different ontologies: Time as construed in the moving time metaphor is a more ‘mobile’ entity than physical locations, which are completely fixed.

Note, incidentally, that these facts also argue against deriving temporal concepts from spatial ones, in accord with the claim being made in this paper that neither of them are derived from the other.

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Jackendoff (1983) argues that the sentences in (12) assert the temporal location of an event (and change or lack thereof) parallel to the spatial expressions in (13).

(13)  a. The statue is in the park.
    b. We moved the statue from the park to the zoo.
    c. Despite the weather, we kept the statue on its pedestal.

(Jackendoff 1983:190)

The conceptualization might be phrased as EVENTS ARE LOCATED ON A TIME-LINE. Unlike the moving time metaphor or the moving ego metaphor, reference to the ego or to the time flow is not essential. Thus the abstract movement in (12b), i.e., change of scheduling, is described as in Figure 6.

Closely related to this conceptualization is the following metonymy, which is motivated by a contiguous relationship between an event and its temporal location.

TIMES STAND FOR EVENTS OCCURRING AT THOSE TIMES

(14)  a. Last night was fun.
    b. The day before Christmas is crazy.
    c. Monday mornings always go wrong.   (Lakoff 1993a:34)

EVENTS ARE LOCATED ON A TIME-LINE can be integrated into Figure 3 to form a coherent whole. In fact, it may combine with either the moving time metaphor or the moving ego metaphor to create ambiguities in some instances. Miller & Johnson-Laird (1976) point out that (15) may mean either that the date became two days later or that it became two days earlier, depending upon whether you think of yourself as advancing into the future or of time as advancing toward you.

(15)  He advanced the date of the meeting by two days.

(Miller & Johnson-Laird 1976:463)

Lindner (1981) similarly observes that (16) may mean either that the deadline will be postponed or that it will be set one hour earlier.

(16)  Move the deadline up by an hour.   (Lindner 1981:141)

The two readings of (15) can be illustrated as in Figure 7, where \( t_1 \) stands for an originally scheduled time, and \( t_2 \) a newly set time.
In (a), the ego is moving along a stationary time line (landscape) and is thus advancing in the direction of the future. In contrast, in (b) the direction is reversed by a perspective shift. The ego (or the time flow) is conceptualized as stationary, while the time line (landscape) passes him.\(^6\)

That the model in Figure 3 thus accounts for a variety of conceptualizations related to time confirms the claim that what is crucial is the inherent structure of each field, rather than the cross-field parallels. Lakovian metaphors stated in the form of ‘A IS B’ simply describe particular aspects of this model.

One final word about movement in the Temporal field. I have distinguished time flow from the static time line and claimed that the ego is conveyed on the time flow. Thus despite the term ‘moving ego metaphor’, it is time, not the ego, that moves. The ego is, so to speak, in the vehicle of time, so that as the vehicle moves, the ego may well be said to move as well.

But the ego itself cannot move at will, as it can in spatial movement. (17) is not acceptable except in a scientific fiction setting like *Back to the Future*.\(^7,8\)

(17) *John went from Tuesday to Wednesday.*

3.2. Possessional

Let us now turn to the Possessional field, whose representative examples are the following:

(18) a. Beth has/possesses/owns the doll. The doll belongs to Beth.
    b. Beth received the doll.
    c. Beth lost the doll.

\(^6\) Marianne Gullberg (personal communication) has pointed out that the two interpretations have gestural correlates. Depending upon the metaphor chosen, the speaker either points to his/her chest (moving time) or moves his/her hand forward (moving ego).

\(^7\) One of the anonymous reviewers suggested that because (17) can be acceptable, albeit in a special context, the restriction in question on the ego is pragmatic rather than conceptual.

\(^8\) Lynne Roecklein (personal communication) has pointed out that (17) becomes acceptable if John was on a plane which was crossing the date line.
d. Amy gave the doll to Beth.

e. Amy sold the doll to Beth for $5.

f. Beth bought the doll from Amy for $5.

(Jackendoff 1983:192–93)

Being possessed is conceptualized as abstract location, and change of ownership as change of abstract location. The parallelism between change of ownership and spatial motion is clearly seen in the prepositions used: the object of from is associated with the initial state of the change (18f), while that of to is associated with the final state of the change (18d, e). Thus the paths in the Possessional field consist in the transfer of goods as well as the transfer of money (cf. Fillmore 1977).

As Jackendoff (1992) points out, the possessional path differs from the physical path with respect to the dimensionality.

Physical space is of course 3-dimensional, so an object can move up, down, frontward, backward, and sideways. By contrast, the possessional parallel has no dimensions: one can’t give something upward or frontward.

(Jackendoff 1992:64)

Also, the possessional path is discontinuous.

Physical space is continuous: if something moves from point A to point B, it occupies all the intermediate positions between A and B along the way. By contrast, the possessional parallel is discontinuous: there are no intermediate positions that an object traverses between being owned by X and being owned by Y. One can move a book toward or even partway toward Bill; but one cannot give a book toward, much less partway toward, Bill.

(Jackendoff 1992:64)

Thus the possessional paths degenerate essentially into their endpoints, i.e. participants of the transaction. Consequently, only a very limited range of spatial terms like from or to can be used to describe ‘possessional space’.

In Figure 8, participants are described as point-like entities without any extension whatsoever, and hence no bounded area seems discernible. Yet sometimes out occurs, as in the following verb-particle combinations.

(19) a. Did you lend out all your books?

b. He bought a bunch of trucks and rented them out.

(Lindner 1981:78)

![Figure 8](image-url)
Lindner (1981:79) observes that the transfer of ownership is codable by \textit{out} in (19) because:

possession is construed as an abstract neighborhood around a person, a sort of sphere of influence, such that items owned are \textit{IN} it and items transferred to someone else are \textit{out}.

Consequently, possessional location in Figure 8 is to be taken as having some extension as shown in Figure 9. The possessional field may thus be characterized by the metaphor \textit{POSSESSIONS ARE OBJECTS IN A PERSON’S PROXIMITY}. \footnote{I am indebted to one of the reviewers for this characterization.}

\subsection*{3.3. Identificational}

Finally, let us consider the Identificational field, which concerns categorization and ascription of properties. (20) gives examples of verbs in this field.

\begin{enumerate}[(a)]
    \item Elise is a pianist.
    \item Elise became/turned into a mother.
    \item The coach changed from a handsome young man into a pumpkin.
\end{enumerate}

The basic conceptualization may be phrased as \textit{PROPERTIES ARE LOCATIONS}: being a member of a category or having a property plays the role of location, and change of property is change of abstract location. \footnote{Lakoff (1990) says \textit{CHANGE OF STATE IS CHANGE OF DIRECTION} to handle cases like (i):}

\begin{enumerate}[(i)]
    \item The milk turned sour.
\end{enumerate}

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{figure9.png}
\caption{POSSESSION NEIGHBOURHOOD}
\end{figure}
categorization, viz. CL\textsc{ASSICAL CATEGORIES ARE CONTAINERS} (Lakoff 1990). Thus part of \((20c)\) can be described as in Figure 11, where the coach went into the bounded area of the category \textit{pumpkin}.

While expressions of change as in \((20b, c)\) involve only one dimension, it seems that the Identificational field does not require strict linearity. Alongside \((21)\), which is often cited as an Identificational case, we have \((22)\).

\begin{enumerate}
  \item Our clients range from psychiatrists to psychopaths. 
    \footnote{Jackendoff 1983:196} \\
  \item The church membership ranges over many professions.
\end{enumerate}

If \((22)\) counts as an identificational case, then identificational space is two-dimensional.\footnote{I am grateful to Lynne Roecklein for helping me realize that identificational space is not limited to one dimension.}

3.4. Motion and Path

Having seen how the non-spatial semantic fields are structured, we are now in a position to see clearly what are the non-spatial counterparts of motion and space. Let us briefly summarize varieties of motion and space.

3.4.1. Varieties of Motion. In the Temporal field, time is conceptualized as moving. Yet there is another thing that can be moved, i.e. scheduling of activities (e.g. \textit{They moved the meeting from Tuesday to Thursday}). Consequently, there are two kinds of abstract motion in this field: passage of time and change of scheduling.

In the Possessional field, the transfer of ownership counts as motion,
and in the Identificational field, change of properties is change of abstract location.

3.4.2. Varieties of Space. Varieties of space are distinguished from each other in terms of three parameters: dimensionality, inherent direction, and continuity as shown in Table 1.

Physical space is three-dimensional. It is not inherently directed. Thus, given the two locations A and B, you can go either from A to B or from B to A. And physical space is continuous.

Temporal space is one-dimensional. It is inherently directed in that time flows necessarily from the past to the present to the future in the Western conceptualization of time. And it is continuous.

Possessional space is unique in that it ranges over the discontinuous unstructured set of individuals. Nothing prevents an arrangement of the possessors over a two-dimensional area, and in this sense possessional space can be said to be two-dimensional. Yet only the end-points of this space serve as locations. Transfer of ownership goes from anyone to anyone else, so possessional space is not inherently directed.

Finally, Identificational space is two-dimensional. It is not inherently directed: nothing seems to limit the direction of change of properties. And it is continuous.12

3.4.3. Formalization. Having identified what counts as motion and how the spaces are constrained in the four semantic fields, the next task is to formally state how field-specific properties constrain the cross-field parallelism.13

<table>
<thead>
<tr>
<th></th>
<th>Spat</th>
<th>Temp</th>
<th>Poss</th>
<th>Ident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensionality</td>
<td>3-D</td>
<td>1-D</td>
<td>2-D</td>
<td>2-D</td>
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<tr>
<td>Directedness</td>
<td>–</td>
<td>+</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Continuousness</td>
<td>+</td>
<td>+</td>
<td>–</td>
<td>+</td>
</tr>
</tbody>
</table>

12 Gruber (1976) observes as follows, which is another instance of cross-field non-parallelism.

The specification for possession and identity, once made, cannot be refined or elaborated upon. They are automatically of absolute specification. Position may be specified in greater degrees of accuracy. (Gruber 1976:82)

Thus two Source-Goal pairs may appear in the Spatial field but may not do so in the Possessional field.

(i) a. John sent the message from New York to Philadelphia to Bill.
    b. *John gave the letter to New York to Bill (Gruber 1976:80–81)

13 Earlier versions of this paper exclusively relied on pictorial representations, about which a reviewer commented that simply drawing pictures without discussing formal...
Jackendoff (1991) has already provided machinery to encode specifications of dimensionality (DIM nd) and directedness (±DIR). In order to handle the continuousness parameter, I introduce a new feature ±DEN (for density).14 The definition of density is borrowed from Jackendoff (1996b).

(23) An axis X is linearly ordered iff there is an ordering relation < on X such that for every distinct x1, x2 ∈ X, either x1 < x2 or x2 < x1

(24) A linearly ordered axis X is dense iff for every x1, x2 ∈ X such that x1 < x2, there is an x3 such that x1 < x3 < x2. (Jackendoff 1996b:351)

Consequently, the path constituent is schematically expressed as in (25).

\[
\begin{pmatrix}
\text{DIM nd} \\
\alpha \text{DIR} \\
\beta \text{DEN} \\
\text{Space}
\end{pmatrix}
\]

Possible values for the paths are listed in Table 2.

As an illustration of how cross-field non-parallelism is captured, let us consider FROM and TO. According to Jackendoff (1991), TO and FROM are decomposed into (26a) and (26b), respectively.

<table>
<thead>
<tr>
<th>Spat</th>
<th>Temp</th>
<th>Poss</th>
<th>Ident</th>
</tr>
</thead>
<tbody>
<tr>
<td>n ≤ 3</td>
<td>n ≤ 1</td>
<td>n ≤ 2</td>
<td>n ≤ 2</td>
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<tr>
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<td>α = +</td>
<td>α = ±</td>
<td>α = ±</td>
</tr>
<tr>
<td>β = +</td>
<td>β = +</td>
<td>β = −</td>
<td>β = +</td>
</tr>
</tbody>
</table>

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14 It is tempting to use CONT for continuousness, but Jackendoff (1996b) already used CONT (‘containing’) for an entirely different purpose. In order to avoid confusion, I chose to introduce a new feature.

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(26) a.  
\[ \text{TO } X = \begin{pmatrix} +b, -i \\
\text{DIM 1d DIR} \\
\text{Space BDBY}^+ ([\text{Thing/Space } Y]) \end{pmatrix} \]

b.  
\[ \text{FROM } Y = \begin{pmatrix} +b, -i \\
\text{DIM 1d DIR} \\
\text{Space BDBY}^- ([\text{Thing/Space } Y]) \end{pmatrix} \]

+b, −i indicates +bounded, −internal structure; BDBY + and BDBY − stand for the positive end (a Goal) and the negative end (a Source) of the path.

The representations in (26) are valid for Temporal and Identificational fields, for both of these fields allow for the values 1d, +DIR, and +DEN. But in the Possessional field, the paths reduce to their end-points. One way to express an end-point is found in Jackendoff (1991), who advances a featural decomposition of AT-END-OF as in (27).

(27)  
\[ [\text{Place AT-END-OF}([\text{Path } X])] = \begin{pmatrix} +b, -i \\
\text{DIM 0d} \\
\text{Space BDBY}^+ ([X]) \end{pmatrix} \]

By extending this formalism, the Possessional FROM-TO is now expressed as in (28).  

(28) \[ \text{FROM}_{\text{Poss }} Y \text{ TO}_{\text{Poss }} X = \begin{pmatrix} +b, -i \\
\text{DIM 0d} \\
\text{Poss. Space BDBY}^- ([\text{FROM } Y]) \end{pmatrix} \begin{pmatrix} +b, -i \\
\text{DIM 0d} \\
\text{Poss. Space BDBY}^+ ([\text{TO } X]) \end{pmatrix} \]

4. Applications

The contributions of the field-specific properties to the (non-)parallelism are further appreciated by looking at the cases where lexical items appear in more than one semantic field. In what follows, I will examine the lexical items spread, between, and over and certain extent verbs like go as in This road goes from Denver to Indianapolis.

4.1. Spread

Let us begin with spread, which appears in all four semantic fields and well illustrates cross-field non-parallelisms. In the Spatial field, where

\[ \text{FROM and TO embedded under BDBY}^- \text{ and BDBY}^+ \text{ are of course abbreviations of (26b) and (26a)}. \]
physical space is three-dimensional and continuous, *spread* may express a mass’s movement over a two-dimensional area (Figure 12).

(29) The syrup spread out. (Lakoff 1987:432)

Alternatively, *spread* may describe a radial movement of multiple entities as in (30) and Figure 13.

(30) a. They spread south and colonised the plains of Africa. (COBUILD)

   b. Settlers soon spread inland. (OALD)

(29) and (30) are roughly represented as in (31a) and (31b), respectively (cf. Iwata 1996).

\[
\begin{align*}
(31) & \quad \text{a. } \left( \text{GO}_{\text{Spat}} \left( +b, -i \right. \right. \\
& \quad \left. \left. \text{DEF} \right) \right) \left( \text{COMP} \left( -b, -i \right) \right) \left( \text{SYRUP} \right) \right) \left( \alpha \left( -b, -i \right. \right. \\
& \quad \left. \left. 2d + \text{DIR} + \text{DEN} \right) \right) \left( \text{BDBY}^{-}([\alpha]) \right) \\
& \quad \text{b. } \left( \text{GO}_{\text{Spat}} \left( +b, +i \right. \right. \\
& \quad \left. \left. \text{DEF} \right) \right) \left( \text{COMP} \left( -b, +i \right) \right) \left( \text{THEY} \right) \right) \left( \alpha \left( -b, -i \right. \right. \\
& \quad \left. \left. 2d + \text{DIR} + \text{DEN} \right) \right) \left( \text{BDBY}^{-}([\alpha]) \right)
\end{align*}
\]

What’s relevant for the current discussion is the specification of boundedness in the first argument slot, and those of dimensionality, directedness and continuousness in the second argument slot. In the first argument slot of GO in (31a), the constituent containing \(-b, -i\) is embedded under COMP. This is because *the syrup* in (29) seems to be
contextually bounded, although mass nouns are lexically unbounded. Jackendoff (1996b:25–26) proposes to handle the bounded reading of a mass noun in (32a) by means of COMP, which maps $-b$ onto $+b$.

(32) a. Will you mop that water?
   b. that water = $\left( +b, -i \right)
                \begin{array}{c}
                \text{DEF}
                \text{COMP} \left( \begin{array}{c}
                -b, -i \\
                \text{WATER}
                \end{array} \right)
                \end{array}$

In the second argument slot, the feature specification indicates a two-dimensional (2d), directed (+DIR) and continuous (+DEN) space. (31b) is basically the same as (31a), except that in the first argument slot the specification of boundedness is that for aggregates, i.e. $-b$, $+i$.

Let us consider the Temporal field next, where the temporal path is one-dimensional and continuous. In (33) and Figure 14, a continuous, linear entity occupies a certain extension on the temporal path.

(33) Their experience of elation was spread over twenty years.

As with the Spatial field, multiple entities or a mass may be located on the time line. In (34) and Figure 15, occasions of payment are distributed evenly on the time line.

(34) spread the payments over three months (OALD)

(33) and (34) are represented as in (35a) and (35b), respectively. Unlike the Spatial senses of spread, the specification of dimensionality is necessarily one-dimensional.

(35) a. $\left( \begin{array}{c}
\text{GO}_{\text{Spat}} \left( +b, -i \right)
\text{DEF}
\text{COMP} \left( \begin{array}{c}
-b, -i \\
\text{EXPERIENCE}
\end{array} \right)
\end{array} \right)^{\alpha}
\begin{array}{c}
+b, -i \\
\text{1d +DIR +DEN}
\end{array}
\left( \begin{array}{c}
\text{BDBY}^{-}([a])
\end{array} \right)$

\newpage

Figure 14

Figure 15
In the Possessional field, possessional pseudo-space ranges over ‘the discontinuous, unstructured set of individuals’ (Jackendoff 1992:65). This limited range prohibits senses involving continuous movement or extension. Sentence (36), which may be paraphrased by ‘distribute’, seems to be one example applied to the Possessional field (Figure 16).

(36) He spread the wealth among his five children.

End points of a path can be expressed using the mechanism noted in 3.4.3. above. Thus (36) may be represented as in (37).

\[
\begin{align*}
\text{GO}_{\text{Poss}} & \begin{pmatrix}
+b, -i \\
\text{COMP}\left(\begin{bmatrix}
-b, -i \\
\text{WEALTH}
\end{bmatrix}\right)
\end{pmatrix}
\end{align*}
\]

In the Identificational field, the path may be a line (Figure 17).

(38) Our products spread from a child’s tricycle to a two-cylinder motorcycle. (Pittman 1965)

Or the space may be a two-dimensional area (Figure 18).

(39) Our products were spread over a wide range of applications.

Accordingly, the specification of dimensionality may be either one-dimensional or two-dimensional.

\[
\begin{align*}
\text{GO}_{\text{Ident}} & \begin{pmatrix}
+b, -i \\
\text{COMP}\left(\begin{bmatrix}
-b, +i \\
\text{PRODUCTS}
\end{bmatrix}\right)
\end{pmatrix}
\end{align*}
\]
Thus a single schema of *spread* has a variety of manifestations in different semantic fields.

4.2. Between

4.2.1. Spatial. Another good illustration of cross-field non-parallels comes from *between*. But *between* presents a more complex story than *spread*, for it seems to possess at least three schemas. Schema (A) is exemplified in (41).

(41) Aranjuez is between Madrid and Granada. (Hawkins 1984:169)

The Theme occupies just a portion of the space separating the two points. The *between* instantiating this schema can be modified by expressions emphasizing an intermediate position between the two points, like *somewhere* or *midway*.

(42) a. The island of Santa Catarina is roughly midway between Sao Paolo and Porto Alegre. (COBUILD)
   b. I lost my keys somewhere between the car and the house. (OALD)

The order of the two terms can be reversed without a significant meaning difference or a loss of grammaticality.

(43) a. Aranjuez is between Madrid and Granada.
    b. Aranjuez is between Granada and Madrid.

And in the Spatial field schema (A) can take more than two terms.

(44) Switzerland lies between France, Germany, Austria and Italy. (OALD)

This is possible because one of the essential features of *between* is that the terms it connects (or separates?) are end-points, and physical space allows for an arrangement in which the four places named serve as end-points as in Figure 19.
Next let us go on to schema (B), as exemplified in (45).

(45) This train runs between Los Angeles and San Diego.

Hawkins (1984) observes that unlike from – to, between is not directed, and that (45) contrasts significantly with (46).

(46) This train runs from Los Angeles to San Diego.

In (46), the train starts its trip in Los Angeles and ends up in San Diego. While this might also be true of (45), a more likely interpretation of (45) is that the train alternately goes from one city to the other.

This contrast becomes even more apparent when the order of the two end-points is reversed. While the direction of the train in (47a) is necessarily the opposite of that in (46), this is not a necessary feature of the contrast between (45) and (47b).

(47) a. This train runs from San Diego to Los Angeles.
   b. This train runs between San Diego and Los Angeles.

(Hawkins 1984:77–78)

Thus schema (B) codes alternate movements of a Theme between the two end-points.

Schema (C) is instantiated in (48), where the whole path is designated.

(48) the distance between the spindle center and the column

(Brown Corpus)

The three schemas available in the Spatial field are illustrated in Figure 20.

These three schemas are formally represented as follows. Schema (A) expresses a space that is bounded by but does not include end-points. The end-points are introduced by BDBY. BDBY is chosen rather than BDBY⁺ (a Goal) or BDBY⁻ (a Source) because the end-points of between are neither a Source nor a Goal.
In order to cover cases of *between* taking more than two terms as in (44), (49) needs to be further generalized into (50).

\[
\begin{pmatrix}
-b, -i \\
\text{DIM nd } -\text{DIR } +\text{DEN} \\
\text{BDBY}([X], [Y])
\end{pmatrix}
\]

where \( k \geq 2 \),

- if \( k = 2 \), \( n = 1 \);
- if \( k > 2 \), \( n = 2 \)

When the space is bounded by two end-points (\( k = 2 \)), it is a one-dimensional line (\( n = 1 \)). If the end-points are more than two (\( k > 2 \)), then the space is two-dimensional (\( n = 2 \)).

Schema (B) and Schema (C) are represented as in (51a) and (51b), respectively.

\[
\begin{pmatrix}
-b, -i \\
\text{DIM 1d } +\text{DIR } +\text{DEN} \\
\text{BDBY}^\pm([X], [Y])
\end{pmatrix}
\]  

\[
\begin{pmatrix}
+b, -i \\
\text{DIM 1d } -\text{DIR } +\text{DEN} \\
\text{BDBY}([X], [Y])
\end{pmatrix}
\]

(51a) differs from (49) and (51b) in that its end-points are introduced by \( \text{BDBY}^\pm \), where \( \pm \) indicates that either end-point can serve as a Goal or a Source; (51b) differs from (49) and (51a) with respect to the value \(+b\), which means that the designated space includes the end-points.

4.2.2. *Temporal*. Since Temporal space is one-dimensional and continuous, schema (A) and schema (C) are applicable. (52) and (53) are instantiations of schema (A) and schema (C), respectively.

(52) at \{some/any\} time between two and three o’clock

(53) the 47 years between 1817 and 1864

Because of the continuous path, temporal *between* can be modified by \{sometime\} time as in (52), both of which refer to an arbitrary intermediate point in time, just as *somewhere* designates an intermediate point in space.

Because the temporal path is directed, the order of the two terms cannot be freely reversed.
(54)  a. You’ll have to go between 9 and 10 tomorrow morning.
    b. *You’ll have to go between 10 and 9 tomorrow morning.

And because the temporal path is one-dimensional, temporal *between* cannot take more than two terms.

(55)  *between 2,3 and 4 o’clock

More than two places can be end-points if they are spread over a two-dimensional area, as is the case with (44).

(44) Switzerland lies between France, Germany, Austria and Italy.

But in the case of temporal space, which is linear, this is impossible. And it is impossible to place more than two end-points on a line, which has only two end-points.

The two schemas applied to the Temporal field are represented as follows:

(56)  a. temporal schema (A)  b. temporal schema (C)

\[
\begin{pmatrix}
-b,-i \\
\text{DIM 1d} +\text{DIR} +\text{DEN} \\
\text{BDBY}^{-}\langle[X]\rangle, \text{BDBY}^{+}\langle[Y]\rangle
\end{pmatrix}
\begin{pmatrix}
+b,-i \\
\text{DIM 1d} +\text{DIR} +\text{DEN} \\
\text{BDBY}^{-}\langle[X]\rangle, \text{BDBY}^{+}\langle[Y]\rangle
\end{pmatrix}
\]

The specification of continuousness (+DEN) in (56a) accounts for modifiability by \{some\} time in (52); that the end-points are introduced by BDBY– and BDBY+, which express directedness, captures the fact that the two terms cannot be reversed.

The restriction on the number of terms which *between* takes can be formally captured as well. Note that the correlation between dimensionality and the number of terms is already encoded in (50), stated above and repeated here.

(50)  \[
\begin{pmatrix}
-b,-i \\
\text{DIM nd} -\text{DIR} +\text{DEN} \\
\text{BDBY}\langle[X]_1, \ldots, [X]_k\rangle
\end{pmatrix}
\]

where \(k \geq 2\),
- if \(k = 2\), \(n = 1\); if \(k > 2\), \(n = 2\)

In the Temporal field \(n = 1\), so that the number of terms (k) must be exactly two.

Even with temporal *between*, the end-points may be more than two provided the number is indefinite.

(57)  a. Between meals, she came to my room.
    b. *Between 3 meals, she came to my room.
    c. ?*Between breakfast, lunch, and dinner, she came to my room.
This might appear to call for a modification of (50). But here repeated occasions of meal are distributed on the time line (Figure 21).

Thus (57a) is an indefinite plural counterpart of schema (A)’s taking two end-points as in (58). It is to be treated differently from cases like (44).

\[
(58) \begin{align*}
&-b, -i \\
&\text{DIM 1d + DIR + DEN} \\
&BDBY^-(\text{[MEAL]}), BDBY^+(\text{[MEAL]}) \\
&-b, -i \\
&\text{DIM 1d + DIR + DEN} \\
&BDBY^-(\text{[MEAL]}), BDBY^+(\text{[MEAL]}) \\
&-b, -i \\
&\text{DIM 1d + DIR + DEN} \\
&BDBY^-(\text{[MEAL]}), BDBY^+(\text{[MEAL]}) \\
&\vdots
\end{align*}
\]

It seems that schema (B) is inapplicable in the Temporal field. This is probably due to the difficulty of thinking of alternate movements in the Temporal field that correspond to (45).

4.2.3. Possessional. Possessional space being discontinuous, the paths reduce to their end-points. Therefore, schema (A), which designates an intermediate position, is not compatible with the Possessional field. Neither is schema (C), which designates the entire path. Even schema (B), coding alternate movements of a Theme, does not seem to be applicable.

Instead, the following is an example of *between* applied to the Possessional field.

\[
\begin{tikzpicture}
  \node (X) at (0,0) {X};
  \node (A) at (-1,-1) {A};
  \node (B) at (1,-1) {B};
  \draw (X) -- (A);
  \draw (X) -- (B);
\end{tikzpicture}
\]

X is shared between A and B

Figure 22

© The Editorial Board of Studia Linguistica 1999.
Tom and Mary shared the sweets between them.

This *between* conveys the movement of ownership to end-points, which can be schematically represented as in Figure 22.

Since the Possessional field allows for an arrangement of more than two possessors over a two-dimensional area, more than two terms may appear.

(60) a. The sweets were shared between Tom, Mary and Bob.
    b. The land was divided equally between the three.

Another possessional use of *between* is (61).

(61) Tom and Bob share the bathroom between them.

Here the bathroom is not divided into two parts, but rather the two people have the use of it. This state of affairs can be depicted as in Figure 23, where the two people jointly form a possessional domain into which the bathroom falls.

The two schemas in Figures 22 and 23 express alternate ways in which more than one person possesses something: either that something is divided into as many distinct parts as there are possessors, or those people jointly possess it as their common property.

In either schema, possessional paths consist of end-points alone: in the former schema, where the two possessors are kept apart, the space separating them does not count as part of the possessional domain. In the latter schema, the distance separating the two possessors is supposed to be zero. The fact that possessional *between* cannot be modified by *somewhere* or *anywhere* seems to support this view.

(62) a. The land was divided {*somewhere/*anywhere} between them.
    b. There is only one bathroom shared {*somewhere/*anywhere} between eight bedrooms.

When it comes to formally representing the two schemas, the former schema expresses end-points of a path, and as seen in 3.4.3, an end-point of a path is captured by using a featural decomposition of AT-END-OF. Thus the *betweens* in (59) and (60a) are represented as (63a) and (63b), respectively.
In contrast, the latter schema consists of points, rather than end-points and is therefore represented as in (64).

\[
\begin{pmatrix}
+b, -i \\
\text{DIM 0d} \\
\text{BDBY}
\end{pmatrix}
\begin{pmatrix}
-b, -i \\
\text{DIM 1d} -\text{DIR} +\text{DEN} \\
\text{BDBY}([\text{TOM}, \text{MARY}])
\end{pmatrix}
\]

\[
\begin{pmatrix}
+b, -i \\
\text{DIM 0d} \\
\text{BDBY}
\end{pmatrix}
\begin{pmatrix}
-b, -i \\
\text{DIM 2d} -\text{DIR} +\text{DEN} \\
\text{BDBY}([\text{TOM}, \text{MARY}, \text{BOB}])
\end{pmatrix}
\]

4.2.4. Identificational. Identificational space being two-dimensional and continuous, schema (A) is applicable. Being at an intermediate position between A and B on the identificational path means being neither A nor B, but a mixture of both.\(^{16}\)

(65) a feeling between love and bemusement

(66) She gave a sound that was something between a gasp and a sob.

(S. Maugham, 1977)

Because of the continuous path, expressions like *somewhere* can be appended to identificational sentences.

(67) a feeling {somewhere/anywhere} between love and bemusement

(68) My job is somewhere between a typist and a personal assistant.

(OALD)

Many expressions besides *somewhere* serve the same purpose.

(69) a. a middle position between the extremes of scepticism and gullibility
   b. The form of galvanic activity is halfway between the magnetic form and the electrical form.

(Brown Corpus)

\(^{16}\) Interestingly enough, in the Identificational field the distinction between *between* and *from – to* becomes far clearer than in the Spatial field. Identificational *from – to* is used to express a change of property as in (ia) or the range of properties as in (ib).

(i) a. The color changed from green to yellow.
   b. This theory ranges from the sublime to the ridiculous.
pieces that are neither short stories nor travel articles but something midway between. (Brown Corpus)

And because Identificational space is two-dimensional, Identificational between can take more than two terms.17

They seemed to be feeling something between love, bemusement and esteem.

. . . but this doesn’t mean that in Kalam the same verb (nη) means something ‘fuzzy’ or intermediate between ‘know’, ‘hear’, and ‘see’ (as well as ‘think’, ‘taste’, ‘read’, ‘feel sorry’, and so on).

(Wierzbicka 1996:202)

Thus schema (A) as applied to the Identificational field is represented as follows.

a. (=65)
   \[
   \begin{pmatrix}
   -b, -i \\
   \text{DIM 1d} \text{ -DIR} +\text{DEN} \\
   \text{BDBY}([\text{LOVE}],[\text{BEMUSEMENT}])
   \end{pmatrix}
   \]

b. (=71)
   \[
   \begin{pmatrix}
   -b, -i \\
   \text{DIM 2d} \text{ -DIR} +\text{DEN} \\
   \text{BDBY}([\text{LOVE}],[\text{BEMUSEMENT}],[\text{ESTEEM}])
   \end{pmatrix}
   \]

Schema (B) is also applicable in the Identificational field. The following examples express alternate changes from one property to the other.

a. He oscillates between conservatism and radicalism.
   b. The temperature wavered between freezing and thawing.

(COBUILD)

The weather alternated between rain and sunshine. (OALD)

As for schema (C), the following seems to be an example.18

the range between green and red

Schema (B) and schema (C) as applied to the Identificational field receive the following representations.

17 Some of the Identificational expressions presuppose a strictly linear scale, which prevents between from taking more than two terms. Color terms are a case in point.

(i) a. a color between green and yellow
   b. *a color between green, yellow and blue

18 One reviewer has observed that (76) may be spatial if we are talking about the spectrum as a spatial entity.
a. Identificational schema (B)

\[ \left( \begin{array}{c}
-b, -i \\
\text{DIM} \ 1d + \text{DIR} + \text{DEN} \\
\text{BDBY}^{\pm}([\text{CONSREVATISM}],[\text{RADICALISM}])
\end{array} \right) \]

b. Identificational schema (C)

\[ \left( \begin{array}{c}
+b, -i \\
\text{DIM} \ 1d - \text{DIR} + \text{DEN} \\
\text{BDBY}([\text{GREEN}],[\text{RED}])
\end{array} \right) \]

To recapitulate, although *between* appears in the four semantic fields, occurrences across these fields are constrained by the field-specific properties and therefore a perfect parallelism fails.

4.3. Extent

A number of English verbs exhibit an extent reading.

(78) The road {went/extended} from Denver to Indianapolis.

Following Jackendoff (1996b), an extent reading is represented as in (79).

(79) X goes Y (Extent)

\[ \left( \begin{array}{c}
[1d]^\alpha \\
1d + \text{DIR} + \text{DEN} \\
\text{BDBY} ([0d \ x \ ] , \ [0d \ y \ ]); \ \langle \text{Time} \ T \rangle
\end{array} \right) \]

The double vertical connecting the two specifications of dimensionality symbolizes the formal operation of projecting a cross-section onto an axis. Thus a slice of the entity denoted by subject NP (x) and a slice of the path denoted by the PP (y) are projected onto their respective axes.

19 (79) is slightly different from the representation given in Jackendoff (1996b), but this does not affect the main point of my argument.
The two axes are then connected by a *structure-preserving* (sp) binding relation through the superscript $\alpha$, thereby ensuring coextensiveness of subject and path in extent sentences.

For an extent reading to be possible, the path must be continuous. This requirement is encoded in (79) by the specification $+\text{DEN}$ in the path constituent. Besides physical space, Temporal space and Identificational space also being continuous ($+\text{DEN}$), extent sentences are available.

(80) Ron’s speech {went/extended/lasted} from 2:00 to 4:00.

(81) a. Our clients range from psychiatrists to psychopaths.
    b. This theory ranges from the sublime to the ridiculous.

But Temporal and Identificational extent sentences differ with respect to the Event/State distinction. The Identificational extent sentences in (81) (Figure 24b) express States, parallel to the Spatial extent sentences in (78). But the Temporal extent sentences in (80) (Figure 24a) describe Events rather than States, for the temporal path itself is incessantly moving (= time flow). (See Iwata 1996).

This cross-field difference can be formally expressed. Jackendoff (1996b) presents the templates for States and Events as in (82), where Events but not States possess an axis that is sp-bound to time.

(82) a. Canonical State

\[
\begin{align*}
\text{Sit} \quad F(X, Y) \cup \\
\text{Time} \quad T
\end{align*}
\]

b. Canonical Event

\[
\begin{pmatrix}
[1d]^\alpha & [1d]^\alpha \\
0 & 0 \\
F(X, Y) & \text{Time} \quad T
\end{pmatrix}
\]

(Jackendoff 1996b:327–328)

Now if we replace the Spatial path in (79) with the Identificational path, the resulting representation in (83a) conforms to the template for a State in (82a). But the semantic structure for (80) obtained by replacing the Spatial path with the Temporal path is (83b), which involves an axis sp-bound to time, like the template for an Event.
(83) a. Identificational
\[
\begin{align*}
&\text{[1d]}^\alpha (\text{CLIENTS}^{1d} \text{+DIR}^{1d} \text{+DEN}^{0d} )^{\alpha} (\text{FROM PSYCHIATRISTS}^{1d} \text{+DIR}^{1d} \text{+DEN}^{0d} )^{\alpha} \\
&\text{BE}([0d \ x], [0d \ y]); \ [\text{Time} \ T]
\end{align*}
\]

b. Temporal
\[
\begin{align*}
&\text{[1d]}^\alpha (\text{SPEECH}^{1d} \text{+DIR}^{1d} \text{+DENSE}^{0d} )^{\alpha} (\text{FROM 2 TO 4}^{1d} \text{+DIR}^{1d} \text{+DENSE}^{0d} )^{\alpha} \\
&\text{BE}([0d], [\text{Time} 0d])
\end{align*}
\]

The absence of extent sentences in the Possessional field is attributable to a feature clash between $-$DEN, i.e. the discontinuity of the path, and $+$DEN, i.e. the continuousness required of extent sentences.

4.4. Over

My claim that field-specific properties constrain the meaning of a lexical item appearing in that field has an important implication for polysemy analysis; it provides a way to show the adequacy of particular polysemy analyses. As an illustration, consider Lakoff’s (1987) network analysis of *over* by means of related image-schemas. One of the metaphorical uses analyzed therein is (84).

(84) The play is over.

The *over* in (84) is claimed to have the image-schema structure shown in Figure 25.

Lakoff states as follows:

In general, activities with a prescribed structure are understood as extended landmarks, and performing such an activity is understood metaphorically...
as traveling along a prescribed path over that landmark. When one gets to the end, the activity is over. (Lakoff 1987:439–440)

While this account is intuitively appealing, it does not explain why this must be the case. Notice that many image-schematic structures are available for *over* in the Spatial field, like the ‘above-across’ sense as in (85a) or the ‘covering’ sense as in (85b) (Figure 26).

(85)  

(a) The plane flew over.  
(b) The board is over the hole.

Is it a pure coincidence that the *over* in (84) has the schema in Figure 25, and not some other one?

From my viewpoint, it is not a coincidence at all. On the contrary, the image-schema structure in Figure 25 is well motivated by properties of the Temporal field. Note that *the play* denotes an Event. An Event is located on a time line, and we humans are conveyed along the time line from the past to the future. Therefore, the conceptualization in which an Event is a LM (= landmark), along which humans, as a TR (= trjector), travel, is perfectly compatible with the structure of the Temporal field.

Of the many image-schematic structures available for *over* in the Spatial field, those that involve the vertical dimension or two-dimensional landmarks are not compatible with the one-dimensionality of time. Thus neither the above-across sense nor the covering sense is available for the *over* in (84).

The same is true of the *over* in *over the weekend*. Clark (1973:49) points out that this sense is related to the spatial one like *over the line segment*, a linear expression without vertical properties. Again, this is due to the inherent structure of the temporal space, where only one-dimension is available.\(^{20}\)

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\(^{20}\) Dewell (1994) advances an alternative analysis of *over*, according to which a curved arc trajectory rather than the flat ‘across’ trajectory is the central schema, which is related to the variants of *over* via image-schema transformations. This entails that the image-schematic structure of spatial expressions like *over the line segment* is not strictly linear, and that the linearity of the temporal expression *over the weekend* is effected via coercion of the arc path into a linear path, induced by inherent properties of the Temporal field.
This indicates that polysemy analysis needs to recognize the contribution which field-specific properties make to metaphorically extended meanings. With proper recognition, one can account for cases which at first sight might appear totally arbitrary.

5. Conclusion

It has been shown that three semantic fields (Temporal, Possessional, and Identificational) have characteristics specific to each field with respect to dimensionality, directedness, and continuousness, and that these field-specific properties constrain cross-field parallelism.

While relatively little attention has been paid to field-specific properties, examining them has important consequences for an account of cross-field parallelism. This is so for metaphor studies as well as the Thematic Relations Hypothesis: it gives us a clue as to not only how parallelism obtains, but also what kind of parallelism obtains and what kind does not.

Accordingly, lexical studies should benefit greatly from pursuing the line of inquiry presented in this paper: abstract domains are much more systematically organized than might appear at first sight, and what is apparently arbitrary and idiosyncratic may turn out to really be due to inherent properties of the relevant domain.

References


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Dictionaries


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