Chapter 9

Neutral and specialized path coding:

Toward a new typology of path-coding devices and languages*

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Abstract

The purpose of this chapter is to present a new typology of path coding used in motion event descriptions in various languages. The crucial starting point for the new typology is how Path is expressed across different constructional types of motion event representations. The constructional types considered are Self-motion, Caused motion, and Emanation. My examination reveals that path-coding devices can be divided into two major kinds: one kind with broad distributional potential across different constructional types of representations, and the other specialized for a particular constructional type of representation. Languages tend to have preferences toward adopting which kind of path-coding devices is predominantly used. Languages that utilize the former can be called neutral path-coding languages, and those utilizing the latter, specialized path-coding languages. Path and Deixis coding in several languages are examined in these terms. Some patterns of intralinguistic and interlinguistic variations are also discussed.[1]

1. Introduction

Talmy's (1991, 2000) typology of event integration has been the most widely discussed typology of motion event descriptions. Talmy classifies languages into two types based on where the Path schema is expressed when the Path schema and one of the co-events of motion (e.g. Manner) are integrated into a clause. The two types are 1) satellite-framed languages, in which Path is expressed by what he calls "satellites" (elements in a position sister to the verb (root)) (e.g. English, Chinese, Atsugewi), and 2) verb-framed languages, in which Path is expressed by the main verb (e.g. Spanish, Japanese, Hebrew).

(1)   a.   *The bottle floated **out** (of the cave).*   (Talmy 1985: 69)

       b.   Spanish

La	*bottella*	***salió***	*de*	*la*	*cueva*	*flotando.*
the	bottle	moved.out	from	the	cave	floating

          'The bottle exited from the cave, floating.'

A number of questions have been raised concerning this typology (see Matsumoto 2003, 2017a; Ibarretxe-Antuñano 2017; Matsumoto and Kawachi this volume). One issue concerns the term "verb." What Talmy means by the verb is the main verb (root) (e.g. Talmy 2009), while verbs in other positions (e.g. participles) are excluded. In this respect, the "verb" does not refer to the grammatical category of the verb, but to the grammatical function of the head of the sentence (Matsumoto 2003). Some have also questioned the appropriateness of the term "satellites". Satellites are defined

as an element in a position sister to the main verb root, either in syntax (e.g. English particles such as *out* in *ran out*), or in morphology (e.g. German prefixes such as *aus* in *ausgehen*) (see Talmy 2000). However, Path is often coded in positions other than these (or the main verb root). Adpositions and case markers (what Wälchli (2001) calls "adnominals" as opposed to "adverbals") are examples. These elements are often referred to as satellites in spite of their failure to satisfy the definition of the term (see Talmy 2016: 135). Based on such observations, Matsumoto (2003) and Croft et al. (2010) suggest that the contrast that Talmy had in mind should be better formulated as one between the main verb and other elements.

Some of the basic assumptions of Talmy's typology may not necessarily hold in all languages. Talmy's typology is based on the idea that Path is coded in one position in a clause, but this is not necessarily the case. Sinha and Kuteva (1995) have pointed out that the same Path notion can in fact be overtly distributed in more than one position in a clause, such as in the main verb and adnominals (see below). Talmy's idea of event integration also presupposes that various subevents of motion are integrated into a single clause. However, Croft et al. (2010) point out that the use of complex sentences involving clausal coordination and subordination is common in motion event descriptions in some languages. Such languages do not fall nicely into the two types Talmy recognizes.

Slobin (2004) also discusses cases where the binary opposition does not seem to apply, and has posited a third type of language. He observes that in some languages a clause can have manner and path verbs (or verb roots) that appear to be of an equal status. He calls these "equipollently framed" languages. He treats Chinese, Jaminjung, Klamath, and Thai as this type (see also Zlatev and Yangklang 2004; Ameka and Essegbey 2013). One Thai example is given in (2), in which a serial verb construction is used.

(2) Thai

cɔɔn   *wîŋ* *khûn*   *banday*   *pay*
John   run ascend   stairs   go
'John went running up the stairs.'

Whether these languages in fact fall into this third category is an empirical question requiring a careful analysis of the syntactic and morphological status of path-coding elements (see Talmy 2009, 2012, 2016).

It is also known that there is intralinguistic variation in terms of path coding positions (Schaefer 1989; Talmy 2000; Matsumoto 2001; Kopecka 2004; Croft et al. 2010; Berthele 2013). A language can adopt a "split system" (Talmy 2000), in which different patterns are employed for different types of events. The choice of linguistic pattern depends on such factors as the nature of the Path (Aske 1989; Slobin and Hoiting 1994). It has been argued that some verb-framed languages exhibit a pattern similar to satellite-framed languages in describing events that do not involve boundary crossing, as in the Spanish example in (3).

(3) Spanish

La botella   *flotó*   *hacia*   *la cueva.* (Aske 1989)
the bottle   floated   toward   the cave
'The bottle floated toward the cave.'

Among Romance languages, which are claimed to be generally verb framed, Italian appears to employ the patterns of satellite-framed languages more often, employing the verb-particle construction (e.g. *andare su* 'go up') in a way not found in many other Romance languages (see Iacobini and Masini 2006). Thus, even outside the languages in which Manner and Path expressions appear to be of an equal status, one needs to talk about the degree to which a particular language adheres to one of the two typological patterns

(see Ibarretxe-Antuñano and Hijazo-Gascón 2012; Hijazo-Gascón and Ibarretxe-Antuñano 2013).

With all of these variations—recognition of the third type and the degree to which a language adheres to a pattern—it is not clear whether a language can be unequivocally characterized as one of Talmy's two types in terms of path coding positions.

In this chapter, I argue that an alternative conceptualization of the typology of motion event descriptions gives a relatively clearer division among languages. New insight can be gained by considering not just Self-motion but also Caused motion and "Emanation" (Talmy 2000), and by observing whether the path-coding devices used are neutral to all three of these types of motion event representations, or specific to one of them. We will see that this new typology classifies languages in terms of two opposing poles, in a way similar to Talmy's, and classifies languages that pose difficulty into one of them, making the third type unnecessary. This new typology does recognize intermediate realizations between the two types, but they can be characterized in terms of the coexistence of (only) two coding patterns. I also examine the coding patterns of Deixis, which are often different from those of (other aspects of) Path. I use data from a number of languages, including Akan, Chinese, English, French, Hungarian, Italian, Jaminjung, Japanese, Korean, Mongolian, Newar, Russian, Sidaama, Spanish, and Thai, often referring to other chapters in this volume.

2. Toward a new typology

2.1. *Constructional types of motion event representations*

The linguistic representation of motion is divided into three major constructional types of motion event representations: Self-motion, Caused motion, and Emanation, exemplified in (4).

(4) a.   Self-Motion (SUBJ moves):

            Bill ran up the stairs.

      b.   Caused motion (OBJ moves):

            Susan tossed a ball up to him.

      c.   Emanation (Nothing in a clause moves):

            Kim looked up at the sky.

The crucial difference among the three lies in the way the Figure participates in the representation of motion. In Self-motion, the Figure appears as the subject of the sentence, as exemplified in (4a). This covers Talmy's (2000) nonagentive motion (*The bottle floated away*) and self-agentive motion (*John ran away*), and roughly corresponds to Goldberg's (1995) Intransitive motion construction. I avoid the term "Intransitive" motion construction because Self-motion covers not just intransitive sentences like (4a), but also transitive sentences which have a Figure as their subject (e.g. *Bill entered the building*).

Caused motion, exemplified in (4b), involves a Causer and a Figure, and the Figure is expressed as the object of the sentence (in the active or unmarked voice). This roughly corresponds to Talmy's agentive motion. Caused motion, however, is more inclusive and can be instigated by a nonagentive cause (e.g. *The sound scared the birds away*).

In Emanation, exemplified in (4c), the Figure is not expressed in any argument of the verb. This constructional type is typically used to depict the fictive motion of vision, speech, and other entities (Talmy 1996; see also Matsumoto 2004; Slobin 2009; Huumo 2010; Cifuentes-Férez 2014; Ma 2016; Cappelle this volume; Kawachi this volume). This representation type is not as common as the other two, and is only one subtype of fictive or nonactual motion expressions (Talmy 1996; Blomberg 2014), but it does represent a clearly different representation type in terms of how a Figure is expressed.

It is important to note that these terms refer to types of linguistic representations and not external events. Speakers can use the Self-motion type of representation to describe events that are caused, as in (5).

(5)　*The napkin blew off the table.*

Emanation events can be expressed in sentences using the Self-motion type or the Caused motion type of representation, as shown in (6).

(6)　a.　*His eyes fell on her.*
　　　b.　*He shot a quick glance at the paper.*

In these examples, the referent of the subject or the object is described as moving. I treat the sentences in (6) as cases of Self-motion and Caused motion, respectively, since the focus in this study is on the linguistic representations of motion events, not on the events themselves. Such linguistic representations reflect the conceptualizer's construals of events.

These three types of motion event representations are very schematic and broad in coverage. A sentence can be regarded as one of the three types regardless of the complexity of the sentence or the complexity of the predicates; each type can take the syntactic forms of a complex predicate construction, serial verb construction, complex sentence structure with subordination, etc. Complex sentences like the following, for example, are regarded as Self-motion and Caused motion, respectively, even when the events described are not integrated into a simplex sentence.

(7)　a.　*He came over here, running as fast as he could.*
　　　b.　*I kicked it hard to send it flying across the room.*

Finally, I consider motion sentences with or without Manner in the discussion of motion event descriptions, unlike Talmy's typology, which

discusses only those sentences with Path and Manner (or another "co-event"). This means that sentences like (8) are treated as cases of Self-motion, and are covered in the discussion here, although there is no co-event represented.

(8) *Bill came to my office.*

2.2. Types of path-coding devices

The proposal I wish to make here is as follows.

(9) a. Path-coding devices can be divided into two major types: those that are intrinsically specialized for a certain type of representation and those that are neutral.
     b. Individual languages have preferences for using either neutral coding devices or specialized coding devices.

Satellites, adpositions, and case markers are generally neutral coding device that can be used for all representation types. The English particle *up*, for example, can be used in any of the three types in (10).

(10) a. *Bill ran **up** the stairs.*
     b. *Susan tossed a ball **up** to him.*
     c. *Kim looked **up** at the sky.*

This is also true of verb prefixes and prepositions in German (see Meex this volume), and preverbs and case markers in Hungarian (Eguchi this volume).

Verbs tend to be a specialized device. Japanese, for example, has different sets of verbs for Self-motion and Caused motion that represent the same Path (Matsumoto 1997, 2017b, 2018).

(11) Japanese

    a. *Taro-wa saka-o*   ***agar-****u*

        Taro-TOP slope-ACC   ascend-NPST

        'Taro goes up a slope.'

    b. *Taro-wa hako-o*   ***age-****ru*

        Taro-TOP box-ACC   lift-NPST

        'Taro lifts a box.'

Some examples of such pairs of verbs are given in (12).

(12) Self-Motion

Self-Motion		Caused motion	
agar(-u)	'ascend'	*age(-ru)*	'lift'
oti(-ru)	'fall'	*otos(-u)*	'cause to fall'
ori(-ru)	'descend'	*oros(-u)*	'cause to descend'
hair(-u)	'enter'	*ire(-ru)*	'cause to enter'
de(-ru)	'exit'	*das(-u)*	'cause to exit'
hanare(-ru)	'go away'	*hanas(-u)*	'cause to go away'
tikazuk(-u)	'approach'	*tikazuke(-ru)*	'cause to approach'
toor(-u)	'go through'	*toos(-u)*	'pierce'

As will be pointed out, however, verbs are not always specialized for a particular representation type: Self-motion verbs (or items derived from them) may be used as neutral path-coding devices.

    I must hasten to add that Japanese does not have specialized path-coding devices for Emanation. There are no verbs representing meanings such as 'look up', 'look down', or 'look out'. In this sense, it does not have a complete set of specialized path-coding devices for all three types of representations.

    Other languages have a relatively rich set of verbs of vision that code directions, though not many such languages have been found. Toba, a Guaykuruan language spoken in northern Argentina, has a few such verbs, with the meanings 'look outward', 'look up', and 'look ahead', which

additionally take directional suffixes (Klein 1981). Wnuk (2016) describes a set of path-coding verbs of vision in Maniq, a Mon-Khmer language: *balaɲ* 'look up', *pəntɛw* 'look up/straight', *ciyə̃k* 'look sideways', *cikiey* 'look sideways/back', *wwɛ* 'look around', *pədɛp* 'look around (of birds)', and *yɔp* 'look down'. Some languages in the Philippines also possess several path verbs of vision. Ilocano (Malayo-Polynesian), for example, has *sirip* 'look into', *talʲaw* 'look back', *tanʔaw* 'look out/down', *tannawag* 'look down', *tamdag* 'look down', *salʲat* 'look around', and *taŋad* 'look up' (K. Yamamoto, personal communication), although some of these may be more appropriately regarded as representing a change in head orientation (i.e., 'raise one's head').

2.3.   *Types of languages*

Based on this typology of path-coding devices, I suggest that there are two ideal types of languages in terms of the preferred use of neutral vs. specialized path-coding devices.

(13)   Neutral path-coding languages use neutral path-coding devices; Specialized path-coding languages use specialized path-coding devices.

Languages may not use a single type of devices all the time and they may not be purely neutral path coding or specialized path coding. Each language can be characterized by how close it is to these ideal types.

Languages that are fairly close to the ideal neutral path-coding languages are not hard to find. Languages treated as satellite-framed languages are generally of this type. The use of satellites and adnominals (e.g. adpositions) used for all three types of representations can be found in English, German (See Meex this volume), Hungarian (Eguchi this volume), and Kathmandu Newar (Matsuse this volume) among the languages treated in this volume. Hungarian and Kathmandu Newar data are given below.

(14)   Hungarian (Eguchi 2017)

a.   *János*   ***be**-rohan-t*   *az   irodá-**ba***.
    John.NOM   into-rush-PST.3SG   the   office-ILL
    'John rushed into the office.'

b.   *János   **fel**-dob-ta*   *a   labdá-t   az   ablak-**hoz***.
    John.NOM   up-throw-PST.DEF.3SG   the   ball-ACC   the   window-ALL
    'John threw the ball up to the window.'

c.   *János   **fel**-néz-ett*   *az   ablak-**hoz***.
    John.NOM   up-look-PST.3SG   the   window-ALL
    'John looked up at the window.'

(15)   Kathmandu Newar (Matsuse 2017)

a.   *Rām   kwathã̄   bwãe-bwãe   **pin-e***   *wa-la.*
    Ram.ABS   room.ABL   running   out-LOC   come-PD
    'Ram came running out of the room.'

b.   *Rām-ã̄   bhakhũgwara   **cwa-e***   *wã-chway-ā   ha-la.*
    Ram-ERG   ball   up-LOC   throw-send-CM   come.CAUS-PD
    'Ram threw a ball up to me.'

c.   *Rām-ã̄   khāpā-yā pwālã   **pin-e***   *swa-la.*
    Ram-ERG   door-GEN   hole-ABL   out-LOC   see-PD
    'Ram looked outside from the hole of the door.'

Languages treated as verb framed tend to be of the specialized coding type, at least as far as Self-motion and Caused motion are concerned. Japanese, Korean, Spanish, French, and Sidaama have path verbs specialized for Self-motion and for Caused motion (see Matsumoto 1997; Im 2001; Gaytan 1998; Kawachi 2017), as exemplified by Japanese in Section 2.2.

A question may arise as to the identification of verbs as specialized for Self-motion. In many languages, verbs for Self-motion and those for Caused motion are morphologically related. Quite often causative path verbs are

derived from self-motion path verbs. For example, Sidaama, a Cushitic language, has the following sets of verbs (Kawachi 2017).

(16)　Sidaama
　　a.　*ka'-* 'rise', *dirr-* 'descend', *ful-* 'exit', *e'-* 'enter', *sa'-* 'pass', *iill-* 'arrive', *tais-* 'cross', *šikk'i y-* 'approach', *do-* 'move around'
　　b.　*ka-i-s-* 'cause to move up, lift', *dirr-i-s-* 'cause to move down', *fušš-* 'take out', *ee-ss-* 'put in', *sa-i-s-* 'cause to pass', *iill-i-š-* 'cause to arrive', *tais-i-s-* 'cause to cross', *šikk'i ass-* 'cause to move a little', *do-i-s-* 'surround'

Self-motion verbs such as *ka'-* may be regarded as neutral devices, since they occur in Caused motion verbs as roots as well. However, as long as the roots such as *ka'-* have a Self-motion meaning such as 'rise', they are verbs specialized for Self-motion. That is why they must be causativized to represent Caused motion. In this sense, such verbs are different from particles/prepositions, which are not (or in fact cannot be) causativized to be used for Caused motion. Thus, Sidaama does indeed have specialized forms for Self-motion and Caused motion, and the latter are morphologically derived from the former.[2]

　　The typology based on the distinction between neutral vs. specialized path-coding devices classifies languages into two sets that are similar to the

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[2]　The direction of derivation between Self-motion path verbs and Caused motion path verbs is not necessarily from the former to the latter in all languages. Some Spanish path verbs such as *aproximarse* 'approach' are formed from Caused motion verbs with the addition of reflexive *se* (see Cifuentes-Férez 2010). A careful morphological analysis of the Japanese causative alternation by Matsumoto (2016) suggests that some Self-motion/Caused motion pairs are Self-motion basic (e.g. *de(-ru)* 'go out' / *d-as(-u)* 'take out'), while others are Caused motion basic (e.g. *ag-ar(-u)* 'ascend' / *age(-ru)* 'lift'), and still others are equipollent (e.g. *toor(-u)* 'go through' / *toos(-u)* 'let go through').

sets identified by the typology based on path coding positions (though, as I demonstrate soon in this section, there is not a complete match). In fact, there is a very good reason why these sets closely match each other. The Self-motion/Caused motion distinction is usually coded in the main verb position, because it is the main verb that determines the subject of the sentence. This means that if a language expresses Path in the main verb in both Self- and Caused motion, it must be a specialized path-coding language. In Talmy's typology, it is not clear why the main verb position is typologically important. In the view presented here, it is important because path-coding verbs in this position must be specialized either for Self- or Caused motion.[3]

At the same time, it is important to note that the two typologies do not pick out exactly the same sets of languages. The main verb position is not the only location in which the distinction between Self-motion and Caused motion may be indicated. Verbs that are specialized for Self- or Caused motion can occur both in the main verb and in an additional position. Mongolian (Mongolic) is a case in point. In this language (at least in the Khorchin dialect (Badema, personal communication)), verbal sequences are commonly used for Self-motion and sometimes used for Caused motion in the way exemplified in (17).

(17)   Khorchin Mongolian
    a.   *alx-a:d*   *gar-dʒ*   *yab-dʒɛ:*
         walk-CONV   exit-CONV   go-PST
         'walked out thither'

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[3]   Languages can often have the same form of some verbs, called labile verbs, used as both causative and noncausative verbs (see Haspelmath 1993). It may appear that in such cases the distinction between Self-motion and Caused motion is not marked in the main verb. However, labile verbs are polysemous, and the same verb forms used in Self-motion and Caused motion can be regarded as having distinct senses.

b. *xo:-ged*   *gar-ga-dʒ*   *yab-ʊ:l-dʒɛ:*
    chase-CONV   exit-CAUS-CONV   go-CAUS-PST
    'chase (a person) out away'

In Self-motion in (17a), a deictic verb sits in the last position with the tense marking, while the manner and path verbs precede it, both in a participle-like "converbal" form. A similar sequence can be used for Caused motion, as exemplified in (17b), but note that not just the deictic verb is causative: the path verb is causative as well (i.e. specialized path coding is used). The causative form of the path verb is required because converbs of the type used here must share their subjects with the main verb, and therefore verbs specialized for Caused motion are used both in the main verb and in a converb.

The main verb status of the deictic verbs in (17) is a matter of empirical investigation: it appears that they are in fact the main verbs. They receive the tense marking, and have the argument structure that matches the arguments found in the sentence, possessing important main verb properties. This means that the path-coding converb that codes the Self-motion/Caused motion distinction in (17) is not the main verb. Mongolian is thus a specialized path-coding language, even though it does not code (non-deictic) Path in the main verb (See Slater 2003: 182 for a similar set of data in Mangghuer (Mongolic); see also Tariana data in the next section).

A similar situation is found in Japanese and Korean, which are usually regarded as verb-framed languages (Talmy 2000). It is true that Japanese quite often code Path in the head position if one talks of the notion of the head morphologically as well as syntactically. In (18) the path verbs occur as the last elements of the compound verbs for both Self-motion (18a) and Caused motion (18b). In the compound verbs used in (18), the last verbs are regarded as the heads of the morphological complexes (Kageyama 1994; Matsumoto 1996), given that they determine the argument structures of the

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whole compounds. Note that Japanese and Korean, like Mongolian, require that the two verbs have the same subject.

(18)   Japanese
   a.   *Taro-wa*   *kaidan-o*   *kake-agat-ta.*
        Taro-TOP   stairs-ACC   run-ascend-PST
        'Taro ran up the stairs.'
   b.   *Taro-wa*   *booru-o*   *nage-age-ta.*
        Taro-TOP   ball-ACC   throw-lift-PST
        'Taro threw the ball up.'

However, a path verb can also be followed by a deictic verb in the case of Self-motion, as in (19), in which the path verb is no longer the last verb, nor does it bear tense.

(19)   Japanese
        Taro-wa   kaidan-o   *kake-agatte*   *ki-ta.*
        Taro-TOP   stairs-ACC   run-ascend   come-PST
        'Taro came running up the stairs.'

Matsumoto (2017b, 2018) treats the deictic verb, bearing tense and occurring in the final position, as the main verb, with the result that Japanese is regarded as a *conditional* head path-coding language, because it codes (nondeictic) Path in the main verb only in the absence of a deictic verb (assuming the separation of Path and Deixis; see Section 5). In the current typology of neutral vs. specialized coding, the status of Japanese is actually quite clear, not requiring a conditional statement. The specialized coding pattern is employed whether or not the deictic verbs are the main verb.

Generally speaking, if a language has a shared subject requirement for a verbal complex, different path verbs are needed for Self-motion and Caused motion, regardless of the main-verb status of those verbs (see Baker and Fasola 2009: 601–602 for related data in Mapudungun, and Margetts 1999:

103–107 for Saliba). This means that the languages that code Path in nonhead verbal elements that share a subject with the head are also specialized coding languages.

3. The status of so-called equipollently framed languages

3.1. Jaminjung and Klamath

How is Slobin's third type treated in the current typology? This section examines those languages claimed to be of this type.

Jaminjung (Non-Pama-Nyungan; Schultze-Berndt 2000, 2015) is a language that has been regarded as an equipollently framed language. This language has only 26 inflecting verbs, which are quite general in meaning, and much of the lexical content is expressed by a distinct lexical category often called "co-verb" in the linguistics of Northern Australian linguistics. These co-verbs cannot be inflected and always co-occur with a verb.[4] Since both Manner elements and Path elements are coded in such co-verbs (see Schultze-Berndt 2015), Slobin argues that neither can be said to be in the main verb, and that Manner and Path are expressed with equal status.

Let us examine this language in our terms. One may note that the same co-verbs representing Path can be used for Self-motion and Caused motion, with the difference marked in the inflecting verb (GO, COME, FALL for Self-motion, and PUT for Caused motion). Examples include the following (Schultze-Berndt 2015: 1124).

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[4] Note that the co-verbs discussed here are different from "converbs" above. A converb is a special form of a verb, while a "co-verb" as used in Australian linguistics is a verb-like category that does not inflect.

(20)   Jaminjung

　　a.　***wurlurlu***　　*yurra-**ngga***　　*intit*　　*jarriny-gi.*
　　　　enter　　　　　1PL.INCL‑GO.PRS　TAG　　house-LOC
　　　　'Let's go inside the house, right?'

　　b.　***wurlurlu*** *ba-**rra***　*beg-gi*　*bany*　　　*mindag*
　　　　enter　　　IMP‑PUT　bag-LOC　IMP.bring　1DU.INCL.OBL
　　　　'put them in a bag and bring them for you and me'

Schultze-Berndt (2015) argues that in such cases co-verbs are monovalent, and neutral with respect to transitivity. In our terms, this means that such co-verbs are neutral in terms of representation type, suggesting that Jaminjung is a neutral path-coding language.

　　Another language often regarded as equipollently framed is Klamath (Penutian; DeLancey 2000, 2002). The majority of verbs in this language have a morphologically complex "bipartite stem", composed of two bound morphemes that DeLancey calls a lexical prefix and a locative-directive suffix. Lexical prefixes include instrumental prefixes, classificatory prefixes, and motion prefixes. The final two are relevant to motion event description, with the former encoding information about Figure (e.g. shape), and the latter, Manner. The locative-directive suffix represents Path (e.g. 'away'), often together with Ground (e.g. 'into water'). Slobin treats Klamath as equipollently framed, on the assumption that Manner and Path are of an equal status within the verb stem.

　　In terms of the distinction between neutral vs. specialized path-coding, the data provided by Barker (1994) and DeLancey (2000, 2003) suggest that the same locative-directive suffix can occur with various subtypes of lexical prefixes to produce the three types of motion representations. The suffix -*ew* 'in(to) water', for example, can occur with prefixes to represent Self-motion (e.g. |hod-w-| /howwa/ 'run, jump into water'), or Caused motion (e.g. |?v-ew-| /?ewa/ 'put a long object in water', |n-ot'w-w-| /not'o:wa/ 'throw a round object into water'), or Emanation (e.g. |del-w-| /delwa/ 'look into water') (see

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DeLancey 2000). A full discussion of Klamath (or related languages such as Atsugewi (Talmy 2009, 2016)) is beyond the scope of this chapter, but this preliminary observation suggests that it uses the neutral coding of Path.[5]

3.2. Thai and other languages with multiple verb constructions

Thai is a language that makes much use of a serial verb construction (Filbeck 1975; Thepkanjana 1986; Takahashi 2000, 2018, this volume; Muansuwan 2002; Kessakul 2005, etc.), which some have claimed lacks a single head or main verb (Takahashi 2000, 2018; see Filbeck 1975 for a differing view). In motion event descriptions, this serial verb construction can be used with a manner verb and path verbs of various types and a deictic verb in a specific order (Thepkanjana 1986; Takahashi 2000, 2018, this volume; Zlatev and Yangklang 2003).

In the present view, Thai can be characterized as follows. The same path verbs and deictic verbs are used for the three different types of motion representations, as exemplified in (21). In terms of the nature of serial verb constructions, (21a) is a case of same-subject serializing and (21b) subject-switch serializing, while (21c) is neither, to use the terms of Crowley (2002) (cf. Aikhenvald 2004). (Note that verbs in the serial verb construction in Thai do not require the sharing of their subjects.)

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[5] A motion prefix creates Self-motion verbs, while a classificatory prefix creates either Self-motion, Caused motion, or locational verbs. DeLancey treats *del* 'look' for vision as an instance of a motion prefix.

(21) Thai (based on data from Takahashi, personal communication)

    a.   *cɔɔn   wîŋ khûn   banday   pay*
          John   run ascend   stairs   go
          'John went running up the stairs.'

    b.   *[cɔɔn yoon   lûuk bɔɔn]   [khûn   pay yaŋ   nâatàaŋ]*
          John   throw ball   ascend go to   window
          'John threw the ball up to the window.

    c.   *cɔɔn   mɔɔŋ   khûn   pay yaŋ nâatàaŋ*
          John   look   ascend   go to window
          'John looked up at the window.'

The use of the same verbs *khûn* 'ascend' in these examples suggests that Thai employs neutral coding of Path. However, there is a slight complication. Given that the verbs *khûn* can be used as independent verbs representing Self-motion, one may regard them as intrinsically specialized for Self-motion. One possibility for sentences like (21b) is that they involve Self-motion as a part of the description of Caused motion. In fact, Takahashi (2000, this volume) claims that Thai caused motion expressions involve a verb representing a causation event, followed by a sequence of verbs representing Self-motion, with the object of the first verb interpreted as the subject of the serial verbs. If this is correct, Thai can be regarded as employing neutral coding based on forms specialized for Self-motion. The difference between English and Thai involves whether the forms used for neutral coding are identical with those specialized for Self-motion (Thai) or not (English).

    The use of verbs for Emanation, as in (21c), however, is revealing and points to another analysis. Verbs subcategorize for their subjects, and this requirement is licensed in the serial verb construction when verbs are used to express Self-motion and Caused motion (if the language allows subject switch in the serial verbs, through which the second verb can take the object of the first verb as its subject). In Emanation, however, the Figure or subject of the path verb is by definition not overtly mentioned, as is true of Thai (21c). In languages in which a serial verb construction can be used to represent

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emanation Path must either 1) have grammar that does not require the subject to be syntactically licensed at least in serial verbs (as Takahashi (2000) appears to assume), or 2) have verbs that have in fact been grammaticalized and no longer have the grammatical property of requiring a subject. If the latter is the case, then the neutral coding devices are said to be *derived from* (but not identical to) verbs that intrinsically represent Self-motion. In this analysis Thai is simply a language with neutral coding devices derived from Self-motion verbs.[6]

The development of neutral coding from forms specialized for Self-motion is in fact a common phenomenon. Many languages have satellites and adpositions that originate in motion verbs (e.g. Aikhenvald 2006: 32; Heine and Kuteva 2002: 117; see also Hammel 1993). Jakaltec, for example, has a set of verb suffixes that can be used for Self-motion, Caused motion, and Emanation, which appear to have derived from path verbs, as discussed by Craig (1993).

Another language often treated as equipollently framed is Chinese (Slobin 2004). Chinese has a number of path verbs, which can be the sole verb in a sentence, but a subset of such verbs can also function as a "directional complement" to the main verb, occurring as the second element of a compound verb (e.g. Lu 1977; Li and Thompson 1982; Lamarre 2008; Maruo 2014).[7] This subset of path verbs can be used for Self-motion, Caused motion and (to some extent) Emanation, as shown in (22).

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[6] Note that while verbs subcategorize for subject, adpositions do not (Jackendoff 1977). In this respect, it is interesting that in Paamese, a serial verb in the core layer juncture construction, used to represent an emanation path, does not agree with the subject of the verb of vision (Crowley 2002: 94).

(i) *nile:le*   *he:ha*   *venik*
     1SG:DIST.FUT-look   3SG:DIST.FUT -go   toward-2SG
     'I will look toward you.'

[7] Such sentences are often discussed under the heading of serial verbs in the

(22) Mandarin Chinese (Lamarre 2017, personal communication)

    a.   *Lǐ Lán pǎo-shang   lóu   lai   le*

         Li Lan run-ascend   stairs   come   PRT

         'Li Lan came running up the stairs.'

    b.   *Lǐ Lán bǎ   qiú   rēng-shang-lai   le*

         Li Lan OM ball throw-ascend-come PRT

         'Li Lan threw the ball up toward me.'

    c.   *Tā cóng luò-tuó de shuāng fēng-jiān   wàng-guo-qu*

         he from camel of two   hump-between look-cross-go

         'He looked from between the two humps of a camel.'

(See Ma 2016:114 for more examples of Emanation in Chinese). The use of directional complements for Emanation is somewhat restricted, especially when it is not accompanied by a preverbal prepositional path phrase. Lamarre (2017) points out that *shang* 'ascend', for example, is rarely compounded with a verb of vision.)

The path verbs used as complements in (22) do not have a causative meaning when used independently. Thus, these directional complements are neutral coding devices. (There are some path verbs, however, such as *tuì* 'return' and *jǔ* 'lift', that cannot be used as directional complements and which can function as causative verbs.)

There is some evidence suggesting that these complements should not be treated the same as path verbs that are used independently. Only a subset of path verbs in Chinese can function as directional complements (Li and Thompson 1981; Lamarre 2008, 2017). In addition, the directional complements are in some cases semantically different from the same forms used as main verbs (see Lamarre 2008; Talmy 2009), and must be regarded

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literature on motion event descriptions (Slobin 2004), but are usually treated as cases of compounding in Chinese linguistics.

as different entities. Thus, Chinese can be said to have neutral coding forms derived from verbs specialized for Self-motion.

Slobin treats Chinese as equipollently framed on the assumption that the elements of a compound are of equal status. However, many scholars treat the first element of a compound as the head (Li 1990; Chen and Huang 1995; Packard 2001; Ceccagno and Scalise 2006; Lamarre 2008; see also Talmy 2009), which is consistent with our analysis of the second element as a complement.

One may note that the verb serializing constructions that require a shared subject necessarily have specialized devices for Self-motion and Caused motion. Aikhenvald (2006: 186) states that in "asymmetrical" serial verb constructions in Tariana, an Arawakan language, a path verb is causativized when occurring with a causative motion verb as the first verb, as in (23b) (cf. (23a), which represents Self-motion).

(23)   Tariana (Aikhenvald 2003: 181, 2006:186)
    a.   *di-kolola*   *di-ɾuku*   *di-a*   *uT-se*
          3SG.NF-roll   3SG.NF-go.down   3SG.NF-go   port-LOC
          'roll down to the port'
    b.   *pi-pala*   *pi-musu-ita*
          2SG-put   2SG-go.out-CAUS
          'take out of (something)'.

In (23) all verbs in a sequence are inflected, and their argument structure matches the argument structure of the whole, suggesting that this language allows an equipollent pattern in terms of path-coding position. In the present typology, it is a clear example of specialized coding.

Concluding this section, I have shown that the so-called equipollently framed languages either use neutral coding, as in Jaminjung, Klamath, Thai, and Chinese, or specialized coding, as in Tariana. The proposed typology therefore does not necessitate an independent third type.

The discussion of Chinese and Thai, however, does suggest that neutral path-coding languages can have Self-motion verbs, and in this sense they are not pure neutral path-coding languages. The next section explains that such cases can be characterized in terms of the coexistence of the two coding patterns.

4. Variations of path coding within and across languages

In spite of the clear opposition of neutral vs. specialized coding, a language as a whole may adopt these two options under different circumstances. Specialized path-coding languages have neutral items as well. Japanese, for example, has case markers used to represent source, goal, and direction, as exemplified in (24).

    (24) Japanese

       Jon-wa   ie-kara   gakkoo-ni   hashitte   it-ta.

       John-TOP house-SRC   school-GOAL   run   go-PST

       'John ran from his house to school.'

There are also local nouns such as *naka* 'inside' and *soto* 'outside', which indicate Conformation (Talmy 2000) or Region (Zlatev 2007) and can be combined with case markers to represent Vector+Conformation (i.e. TO+IN or TO+OUT), as in (25).

    (25)   Japanese

       a.   *Jon-ga   heya-no   naka-ni   hait-ta*

           John-NOM   room-GEN   inside-GOAL   enter-PST

           'John went into the room.'

b. *Jon-ga   tsukue-o heya-no soto-ni   dashi-ta*
   John-NOM table-ACC room-GEN outside-GOAL   exit.CAUS-PST
   'John put the table outside the room.'

Such combinations of local nouns and goal/source markers are neutral devices coding some Path notions. In (25) the notions TO+IN or TO+OUT are doubly indicated, i.e. in the verb and in the combination of a local noun and a postposition.

   Although one may wonder if such local nouns are necessary as far as motion expressions are concerned, the Japanese language cannot do without such local nouns in other respects. The local noun is the sole marker of the spatial relationship in the description of static locations, which are described in terms of local nouns plus a general locative marker *-ni*, as in (26). There are no stative verbs with meanings like 'be inside'.

(26)   Japanese
        Booru-ga   heya-no   naka-ni   aru.
        ball-NOM   room-GEN   inside-LOC   be
        'The ball is inside the room.'

Thus, local nouns are necessary as a part of spatial expressions in Japanese.

   The question, then, is when specialized path-coding languages use neutral coding devices in describing motion. There are interesting crosslinguistically common patterns that are examined in the next two subsections.

4.1.   *Variation according to the type of Path*

In many languages, whether neutral or specialized devices are employed depends on the nature of the Path encoded. Consider in this respect three sets of Paths: TO/FROM, INTO/OUT, and UP/DOWN. On the basis of thirteen

languages, Matsumoto (2014, 2017c, 2018) has argued that these three sets of Paths tend to be expressed rather differently within a language. In Japanese, for example, TO and FROM tend to be expressed in adpositions, as shown in (24). Although FROM and TO can also be coded by the verb (e.g. *sar(-u)* 'leave' and *tuk(-u)* 'reach'), the choice of such verbs to indicate source/goal is far less frequent (Matsumoto 2014, 2018).

In contrast, directional Paths such as UP and DOWN are predominantly expressed in the verb, as in (27).

(27)   Japanese
        Kaidan-o   {agat-ta/ori-ta}
        stairs-ACC   ascend-PST/descend-PST
        "went {up/down} the stairs"

INTO and OUT (or the combination of Vector+Conformation TO+IN and TO+OUT) are very often doubly marked, as in (28) (see also Sinha and Kuteva 1995).

(28)   Japanese
        Heya-no   {naka-ni   hait-ta   /   *soto-ni   de*-ta}.
        room-GEN   inside-GOAL   enter-PST   outside-GOAL   exit-PST
        "went into the room/went out of the room"

The same is true of Italian (Yoshinari 2017), in which TO(WARD) is coded in a preposition, UP in a verb, and INTO in a verb as well as a preposition.

(29)   Italian
        a.   *Sta   venendo   **verso di**   me   correndo*
              is   coming   toward   me   running
              'He is coming toward me running.'

b. *Sta **entrando** velocemente **dentro** il gazebo*
   is   entering   hurriedly   in(to)   the   gazebo
   'He is entering hurriedly into the gazebo.'

c. *Il mio amico correndo **sale** le scale verso di me*
   my   friend running   ascended the stairs toward me
   'My friend ascended the stairs toward me, running.'

See Wälchli and Sölling (2013) for more languages that can express INTO both in verbs and through adnominal/adverbal means.

UP/DOWN can be expressed in the verb even in some typical neutral coding languages such as German and Hungarian (see Eguchi this volume for Hungarian). For example, German, which is often claimed to lack path verbs (Wienold 1995), does have *fallen* 'fall' (Verkerk 2014; see Akita and Matsumoto this volume for the use of *fall* in English). Thus, we may say that UP/DOWN are the Path categories most likely to be coded in verbs, irrespective of the general tendency in the choice of neutral/specialized coding. This hypothesis awaits further examination.[8]

4.2. Variation according to the type of representation

There are also tendencies of variation according to the type of representation. The degree to which neutral coding is used in specialized path-coding languages partially depends on the representation type. Observations suggest that the following generalization holds: The specialized path coding tends to

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[8] Verkerk (2014) says that almost all Indo-European languages she examined have verbs with the meanings of 'fall', 'arrive', 'leave' and 'return', regardless of their typological types. Note, however, that Path notions such as TO and FROM, which are coded in the meanings of 'arrive' and 'leave', are also frequently coded in adpositions. What is needed is a frequency-based study comparing the use of verbs and other items to represent particular path notions.

be more constrained as one goes from Self-motion to Caused motion to Emanation; in contrast, reliance on neutral devices tends to increase.

4.2.1.   Caused motion

There is evidence to support the hypothesis of differential dependence on specialized path coding. For example, it can be pointed out that the use of causative path verbs for Caused motion is more restricted than the use of path verbs for Self-motion.

First, the lexical inventory of verbs coding Path is often more limited for Caused motion than for Self-motion. A clear difference in the Path verb inventory for Self-motion and Caused motion is found in Chinese and Thai. Chinese major path verbs for Self-motion, which are also used as directional complements, do not have a causative use or any causative counterpart. There are certain specific path verbs which also have causative uses (e.g. *tuì* 'return' and *jǔ* 'raise (one's hand)'), but they are limited in number (Lamarre 2017). Similarly, Thai has only a few causative path verbs (e.g. *yók* 'lift' and *sày* 'put in') (Takahashi 2017).

Other languages such as Romance languages have richer sets of path verbs specialized for Caused motion, but their inventories are again somewhat more limited than those specialized for Self-motion. Italian does not have broadly used causative verbs encoding AROUND, ACROSS, OVER, INTO, or OUT, though it has path verbs encoding these Paths for Self-motion (Yoshinari 2017).[9] For INTO and OUT it instead relies on the neutral particles/prepositions *dentro* 'in'/*fuori* 'out', used often with the general caused motion verb *metterre*. Similarly, French lacks general causative path verbs representing AROUND, ACROSS, OVER, or INTO, and for INTO it relies on the neutral *dans* 'in' used with verbs such as *mettre* (see Hickmann and Hendriks 2006; Morita and Ishibashi 2017). The

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[9] There are verbs like *inserire* 'insert', but these are rather restricted in application.

restriction on causative path verbs can also be seen in Japanese to a lesser extent: it does not have causative counterparts of *koe(-ru)* 'go over' and *sugi(-ru)* 'go past' (Matsumoto 1997).

Second, the existing causative path verbs are often limited in the types of causation they can represent. Caused motion can be divided into three major broad semantic types: co-motional, controlled, and ballistic (Matsumoto 2017a; see also Kopecka and Narasimhan 2002). Co-motional caused motion involves a causer moving together with the moved entity, as in carrying something or accompanying someone. Controlled caused motion involves an unmoving person continuously causing something to move, as in using your hand to move something. Ballistic caused motion involves a causer acting on something which then starts to move on its own, as in throwing something. Some Spanish causative path verbs are restricted to co-motional and controlled types. Gaytan (1999: 506) points out that at least in his Guatemala dialect the causative *sacar* 'take out' cannot be used for ballistic caused motion events (his "launching causation"), as in (30a). Instead, a sentence like (30b) is used, with the use of the neutral device *por*.

(30)   Spanish

a.   *Beth* *sacó* *la* *pelota* *por* *la* *ventana* *tirandola.*
   Beth   took.out   the   ball   by   the   window   throwing

b.   *Beth* *tiró* *la* *pelota* *por* *la* *ventana.*
   Beth   threw   the   ball   by   the   window
   'Beth threw the ball out the window.'

Gaytan (1999) states that the sentence in (30a) would be acceptable without the participle in the reading of co-motional causation (see also Gaytan's (1999: 263–264, 285) observations concerning causative *subir* 'make ascend' and *bajar* 'make descend').

A similar observation has been made of Italian causative path verbs. Yoshinari (2017) observes that *sollevare* 'lift' can be used to represent

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controlled causation, as in (31a), but not ballistic causation, leading to the use of a neutral device *su* in (31b) (data from Fabiana Andreani).

(31)　　Italian

    a.　*Ha　sollevato　il　bicchiere　al　　suo　viso.*
       has　lifted　　the　glass　　　to.the　his　face
       'He lifted the glass to his face.'

    b.　*Gianni　ha　lanciato　su　la　palla.*
       John　　has　thrown　up　the　ball
       'John threw the ball up.'

The few causative path verbs in Chinese, such as *jǔ* 'raise', can also only represent controlled causative motion, typically referring to the motion of one's own body parts (Lamarre 2017). Thai *yók* 'lift' and *sày* 'put in' can likewise only be used for controlled causative motion (Takahashi 2017).

In other languages, some causative path verbs are restricted to co-motional caused motion, as has been observed by Kazama (2015) in the Tungusic language Nanai. In this language, a causativizing suffix *-bo/-bu/-wo/-wu* is placed on path verbs such as *ii-* 'enter (a house)', and *too-* 'go away from a river toward a mountain', to produce such verbs as *ii-wu-* 'take into (a house)', and *too-bo-* 'carry something away from a river toward a mountain'.

In Japanese, causative path verbs alone cannot be easily used for ballistic caused motion events. However, they can occur as the second verb of a compound used to represent such events (Matsumoto 1998, 2017b).

(32)　　Japanese

    Jon-ga　　　booru-o　nage-age-ta.
    John-NOM　　ball-ACC　throw-lift-PST
    'John threw the ball up.'

It is perhaps because of this broader use of causative path verbs in Japanese that in the frequency study of Morita and Ishibashi (2017) Japanese speakers used more causative path verbs than French speakers to describe the same events.

4.2.2. Emanation

Most languages which I have been able to examine have no specialized path coding for Emanation, relying totally on neutral devices to express emanation Paths. In Spanish, emanation Paths can be indicated as follows, with the use of neutral items (Matsumoto 2004; Cifuentes-Férez 2014).

(33)   Spanish
    a. *Miré*   *arriba,*   *al*   *cielo*
        looked.1SG   up   to.the   sky
        'I looked up at the sky'
    b. *Miré*   *por*   *el*   *agujero*
        looked.1SG   through/via   the   hole
        'I looked into the hole'

Kawachi (this volume) also points out that Sidaama speakers do not code Path in the verb with Emanation, unlike Self-motion and Caused motion, and they use other means to indicate visual Path (e.g. 'She turned to the inside of the house, and looked').

One way to keep Path in verbs describing Emanation events is to resort to a Caused motion representation, as pointed out by Cappelle (this volume) in French (e.g. <u>lever</u> *le regard* 'raise one's gaze'). Note, however, that such expressions are not considered to be cases of Emanation as a representation type.

In other languages, verbs of vision are transitive verbs and Path is not clearly expressed. This is the case with Japanese and Korean, exemplified by

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the Japanese example in (34). In this example, a local noun *soto* 'outside' is
used to indicate the location of the visual target.

(34) Japanese

mado-no   *soto-o*   *mi-ta.*

window-GEN   outside-ACC   look-PST

'looked out the window (looked at the outside of the window)'

Japanese and Korean have special means to describe Emanation Path,
using path-coding verbs without an overtly coded Figure, maintaining the
Emanation constructional type. For some kinds of Paths, Japanese and
Korean can use verbs specialized for Caused motion compounded with a verb
of vision to describe Emanation, as shown in the Japanese example in (35)
(Matsumoto 2004).[10]

(35) Japanese

Boku-wa sora-o   *mi-age-ta.*

I-TOP   sky-ACC   look-lift-PST

'I looked up at the sky.'   (Matsumoto 2004)

The verb used in this sentence is a compound verb, with the verb of looking
as the V1 and causative path verb as V2. The verb as a whole takes the entity
seen (e.g. the sky in (35)) as its object argument, with the argument structure
of the whole identical to that required by V1. This is an atypical pattern in
Japanese compounding (Kageyama 1994; Matsumoto 1996a, 1998). This

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[10] Aikhenvald (2006:186) notes that in Tariana the verb of vision occurs with a
causative path verb in one type of serial verb construction, as in (i), although in
another type of serial verb construction it occurs with a path verb for Self-motion.

(i)   *di-ka*   *di-ruku-ita*
        3SG.NF-see   3SG.NF-go.down-CAUS
        'He looked down (at something)'

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allows the object (theme) of the V2 (i.e. glance) to be unexpressed, resulting in an Emanation representation in which no moving entity is expressed syntactically. Other similar verbs are listed in (36).

(36)   Japanese

  mi-age(-ru) (look-lift) 'look up', *mi-oros(-u)* (look-drop) 'look down', *mi-yar(-u)* (look-give) 'look toward', *mi-watas(-u)* (look-cause.to.cross) 'look out over', *nozoki-kom(-u)* (peep-cause.to.enter) 'look into'

Korean has a similar pattern, except that the causative path verb is used as V1 (Sohn 1999), as shown in (37). Other similar compounds are listed in (38). These involve the "transferentive" complementizer *-eta*.

(37)   Korean

wuli-nun	*tongkwul*	*sok-ul*	*tuly-eta*	*po-ass-ta.*
We-TOP	cave	inside-ACC	put.in-TRF	look-PST-DEC

  'We looked into the cave.'   (Sohn 1999: 380)

(38)   *chey-eta pota* (lift-TRF see) 'look up', *nayly-eta pota* (lower-TRF see) 'look down', *nay-(e)ta pota* (take.out-TRF see) 'look out', *tuly-eta pota* (put.in-TRF see) 'look in', *tol-ata pota* (turn-TRF see) 'look around'

There are a few things to be said of these examples. First, the choice of causative path verbs rather than Self-motion path verbs in Japanese and Korean is consistent with the nature of visual emanation. The subject of the verb of vision is the sender of a glance, and therefore the subject *causes* the glance to go along an emanation Path. Given that in the two languages the subjects of the complex verbs must be shared, it is natural that causative path verbs would be used.

Second, the use of such verbs to present Path in Emanation is much less common than the use of path verbs for Self-motion and Caused motion. In Matsumoto's (2017b) corpus study of Japanese, Path was indicated in the

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compound verb in only 41% of the examples of Emanation, as opposed to 63% in Self-motion.

As pointed out above, some languages do have specialized path-coding means for Emanation. Maniq, for example, has a set of vision verbs encoding Path. However, Wnuk (2016) points out that the Path categories encoded by those verbs are restricted in comparison with those encoded by path verbs for Self-motion, a pattern consistent with the hypothesized tendency. Wnuk notes that boundary crossing Path categories like INTO and OUT, which are coded in the path verbs for Self-motion, are not coded in the path verbs for vision.[11] Ilocano has a richer set including verbs for INTO and OUT paths, but it lacks those for ACROSS and PAST, which are coded in the path verbs for Self-motion.

As for the relative richness of path verbs specialized for Caused motion and for Emanation, we may similarly hypothesize that there are more of the former than the latter. This would require a close study in languages like Maniq and Ilocano. Kruspe et al. (2015) state that Northern Aslian languages like Maniq have causative-forming affixes and so it would not be a surprise if Maniq had a rich set of causative path verbs. Ilocano has various verb forms based on its focus system, and most path verbs (in Actor-focus and Locative-focus forms) have causative counterparts in the "conveyance-focus form" (Yamamoto, personal communication; see Rubin 2005 for verb forms in

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[11] Wnuk speculates that this may be related to the irrelevance of change of state in visual Path. Visual Path does not lead to change of the state of the moving entity, unlike how a person going into a room undergoes a change. She states that path verbs are associated with such state changes, and that visual Path does not fit this tendency of verbs coding Path. However, directions such as UP and DOWN are the Path categories most likely to be encoded in the meaning of verbs in Self-motion and Caused motion, and Wnuk's observation may suggest that the same may be true of Emanation.

Ilocano). Verbs in these languages need to be examined more closely to confirm the proposed hypothesis.

The fact that visual emanation does not tend to have Path expressed in the verb calls for explanation. One reason may be sought in the nature of Path in vision events. Path determines the temporal contour of the motion event, and in this sense it "frames" motion events (Talmy 2000). For example, an *out* Path makes the motion of a concrete entity telic (bounded), as shown in (39), where the path represented by *out* has an endpoint.

(39)   *Bill walked out of the valley {in an hour/*for an hour}.*

However, this is not the case with vision events, as shown in (40).

(40)   *He looked out of the room {*in a few seconds/for a few seconds}.*

This may mean that Path in vision events does not frame the event in the way it does in concrete motion events. This may be a reason why concrete motion events and emanation do not pattern in the same way (see Kawachi this volume).[12]

However, this is not totally convincing. The reason Path does not determine the temporal contour of vision events is that visual emanation is a continuous event, in which an emanating entity continues to emanate. There are also similar concrete motion events, such as a stream flowing out into a plain. In cases like this, Path does not determine the temporal contours, as in (41).

(41) *The stream flows out into the plain {*in a few hours/for many years}.*

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[12] Kawachi (this volume) makes this claim on the basis of the assertion/negation criterion for framing events. This criterion may be context-dependent and requires a careful analysis.

The relative scarcity of path-coding vision verbs can be attributed to the need to keep a lexicon to a reasonable size. If a language had different sets of path verbs for all emanation processes, which include not just vision but also various kinds of sound and light emissions (e.g. *shout across, shine into*), it would create a very large lexical system. In contrast, if languages can combine verbs of vision with some means to indicate Path (e.g. compounding in Japanese, the use of neutral devices in Spanish), that suffices.

4.3   Gradience based on a two-way opposition

Given the tendencies observed above, one may say that languages can be characterized in terms of how consistently they adhere to either neutral path coding or specialized path coding. There are languages that relatively consistently use neutral coding devices for all representation types, except for a certain path such as vertical path (e.g. German and Hungarian); there are also languages that use specialized coding devices relatively consistently for Self-motion and Caused motion (e.g. Japanese and Spanish), some even possessing those specialized for Emanation (Maniq). Between these two (near) poles are languages that mix the two patterns: predominantly neutral path-coding languages that have specialized path coding for Self-motion (e.g. Chinese and Thai) and predominantly specialized path-coding languages that resort to neutral means more widely than others (e.g. Italian). Note that in this view, no independent third type is assumed; intermediate cases are recognized in terms of how widely the two coding patterns are employed across the representations of different situations.

5. Coding of Deixis

5.1.   Independence of Deixis

Another important observation made in this chapter concerns the status of deixis. Deixis is conceptually a part of a trajectory, composed of a Path schema and a special Ground (e.g. TOWARD THE SPEAKER). Deixis is often treated as a component of Path (Talmy 2000), but in its linguistic representation it is often independent of such Path notions as direction (e.g. UP), vector (e.g. TO), and vector+conformation (e.g. INTO). Deixis is expressed in a morphological and syntactic slot different from Path: it occupies a special position in the sequence of verbs in Thai (e.g. Thepkanjana 1986; Takahashi 2017, this volume), Chinese (e.g. Li and Thompson 1981; Lamarre 2008), Burmese (Lizogub 1992), Japanese (e.g. Matsumoto 1997), Korean (Sohn 1999; Im 2001), Tok Pisin (Verhaar 1995), and Sidaama (Kawachi 2017). It also occupies a special morphological slot in the verbal affixes/preverbs in German (e.g. Dewell 2015; Meex this volume), Jakaltec (Craig 1993), and Kupsapiny (Kawachi 2014). In some cases, the positions of Deixis and Path categories are drastically different. Matsuse (this volume) shows that Path in Kathmandu Newar (Tibeto-Burman) is generally expressed by case markers, postpositions, locational adverbs, and verbal prefixes (Hargreaves 2004; Matsuse this volume),[13] but Deixis is expressed in the main verb in Self-motion and Caused motion, as exemplified in (42).

(42) Kathmandu Newar

    a.   *pāsā*   *sata:*   ***dune***   *bwã:e*   ***wala***

         friend   rest.house into   run   come-PST

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[13] As pointed out by Matsuse (this volume) and Hargreaves (2004), some adverbs in this language are unusual in occurring only with Self-motion deictic verbs, or with causative motion verbs and vision verbs. However, the most frequently used type of adverbs (marked with a locative) occur with both self-motion verbs and caused motion verbs.

'My friend came running into the house.'

b. *pāsā̃:*   *satal-**e***   ***dune***   *ji*   *thāe-**e***

    friend.ERG rest.house-LOC into   1SG position-LOC

    bhakũ:gwārā   *thwān-ā*   ***hala***

    ball   kick-CM   cause.to.come-PST

    'My friend kicked the ball into the house to me.'

In Hungarian (Eguchi this volume), Path is expressed in a variety of neutral devices, but Deixis can be expressed in the verb, as well as in preverbs and case-marked pronominals, as in (43).

(43) Hungarian

    Erika   ***ide-jö**-tt*   ***hozzá-m***.

    Erica.NOM   hither-come-PST.3SG   ALL-1SG

    'Erica came this way to me.'

Jaminjung discussed in Section 3.1 expresses Deixis in the inflecting verb position but most Paths in non-inflecting co-verbs (Schultze-Berndt 2015). Gaagudju (Harvey 2002: 223–231) and Hausa (Newman 2000) have path verbs used in the main verb position, but lack deictic verbs. Instead, verbal affixes are used to mark Deixis. Large-scale surveys of languages conducted by Wälchli and Sölling (2013) and Verkerk (2014) suggest that there is only a weak correlation between the size of path verbs and the existence of deictic verbs.

These pieces of evidence show that Path and Deixis can be quite different in terms of their coding patterns (see also Matsumoto et al. 2017). Such observations motivate an examination of Deixis independently of Path from the perspective of the typology proposed in this chapter.

5.2.   Neutral and specialized coding for Deixis

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Just as is the case for Path, we can see that some languages prefer specialized expressions for Deixis (for Self-motion and Caused motion), while other languages prefer neutral expressions. Many languages including English, Hungarian (this volume), Newar (Matsuse this volume), Sidaama (Kawachi 2017), Mongolian (Badema, personal communication) and Mangghuer (Slater 2003) have different sets of deictic verbs for Self-motion and Caused motion (i.e. specialized coding). In some languages like Newar, causative deictic verbs are used for a wide range of caused motion events, including ballistic causation, as in the Newar example in (42b) (see also Slater 2003: 177 for Mangghuer).

Other languages use deictic verbs as neutral devices to express Deixis in multi-verbal constructions. Thai and Chinese use the same deictic verbs in all representational types of motion events (i.e., Self-motion, Caused motion and Emanation), as in the examples from Thai in (21) and Chinese in (23). This can also be seen in the serial verb constructions in Sranan (Creole; Sebba 1987: 45–46), Tok Pisin (Creole; Verhaar 1995: 99–102), Bislama (Creole; Crowley 2004: 167–169), and Loniu (Oceanic; Hammel 1993).

The neutral use of deictic verbs, however, is often not found in the representation of Emanation. In the Kwa language Akan, deictic verbs can be used in a serial verb constriction to represent Self-motion and Caused motion (see Afreh and Osam 2011; Ameka and Essegbey 2013; Koga 2016), but no such use is found with Emanation (Koga, personal communication): while (44a) and (44b) are acceptable, (44c) cannot be interpreted as indicating an emanation path. Presumably deictic verbs in this language have not been grammaticalized as those in Chinese and Thai have.[14]

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[14]   Note that in this language all of the verbs in the serial verb construction exhibit inflection, though the first verb may drop it (Osam 2004).

(44)   Akan

    a.   *Pàpá   nó   nànté   kɔ̀-ɔ̀   fí!é.*
          man   DEF   walk   go-PST   house
          'The man walked home.'

    b.   *ɔ̀=tó-ó   bóɔ́   kɔ̀-ɔ̀   nì=fí!é   mú.*
          3SG=throw-PST   stone   go-PST   3SG.POSS=house   inside
          'S/he threw a stone into his/her house.'
          (lit. 'S/he threw a stone, it went into his house.')

    c.   *Pàpá   nó   hwɛ́   kɔ̀-ɔ̀   fí!é.*
          man   DEF   look   go-PST   house
          'The man looked (at something), and went into the house.'
          '*The man looked into the house.'

Some languages have no deictic verbs at all and rely totally on such neutral devices as adpositional phrases to express Deixis, as in the Russian examples in (45).

(45) Russian (Bordilovskaya, personal communication)

    a.   *Drug   pod-bejal   **ko   mne.***
          Friend   to-run.PST   to   me
          'My friend ran to me.'

    b.   *Drug   pnul   myach   **ko   mne.***
          Friend   kick.PST   ball   to   me
          'My friend kicked a ball to me.'

Other languages that lack deictic verbs include Tagalog and Polish.

When there is a split within a language, the specialized Deixis coding tends to be more constrained as one goes from Self-motion to Caused motion to Emanation. Deictic coding specialized for Self-motion is more widely found than for Caused motion. Many languages employ specialized deictic coding for the former but not for the latter, possessing deictic verbs but no (lexical) causative deictic verbs. This is the case with Japanese (Matsumoto

1997, 2017b), Korean (Choi and Bowerman 1991), Chinese (Lamarre 2008), Thai (Takahashi 2017, this volume), Marathi (Indo-Aryan; Pardeshi 2011), Dom (Trans New Guinea; Tida 2017), French (Morita and Ishibashi 2017), and Italian (Yoshinari 2017). Thai and Chinese use deictic verbs for Self-motion as a serial verb or as a directional complement to represent Deixis in Caused motion, as in (21b) and (23b).

Some languages have deictic coding specialized for Caused motion whose use is limited to a certain type of Caused motion. Hungarian (Eguchi this volume) has different deictic verbs for Self-motion and Caused motion, but those for the latter are restricted to descriptions of co-motional caused motion, and cannot be used for ballistic or controlled caused motion. A Hungarian example of a causative deictic verb is given in (46) (Eguchi this volume).

(46) Hungarian

Erika	*ide-hoz-ta*	*nek-em*	*a*	*könyv-et.*
Erica.NOM	hither-bring-PST.3SG.DEF	DAT-1SG	the	book-ACC

'Erica brought the book here to me.'

English *bring/take* are similar in this respect to the deictic verbs in Hungarian. In some English dialects, however, *bring* and *take* do not show a contrast in terms of Deixis (Hockett 1990) and those dialects can be said to lack causative deictic verbs.

Where causative deictic verbs are not available, neutral means are employed. Hungarian (Eguchi this volume), for example, has neutral expressions for Deixis, preverbs/adverbs *ide-* 'hither', *oda-* 'thither', and case-marked pronominals such as *nek-em* (Dative + 1SG) and *hozzá-m* (Allative + 1SG). These are used across different types of motion event representations, and are the only option for expressing ballistic caused motion and emanation, as in (47) (cf. (46), (43)).

(47) Hungarian

    a.   *Erika*   **ide**-*dob-ta*   **nek-em**   *a*   *labdá-t.*

        Erica.NOM   hither-throw-PST.3SG.DEF   DAT-1SG   the ball-ACC

        'Erica threw the ball to me.'

    b.   *Erika*   **ide**-*néz-ett*   **hozzá-m**.

        Erica.NOM   hither-look-PST.3SG   ALL-1SG

        'Erica looked toward me.'

I know of no language in which Deixis is expressed in a verb that represents Emanation. Languages with verbs of vision coding several Path categories do not seem to have deictic verbs of vision. Maniq and Ilocano, for instance, appear to lack a verb with the meaning of 'look toward the speaker' (Wnuk, personal communication; Yamamoto, personal communication).

The discussion above suggests that Deixis and Path exhibit a common tendency to shift in that the use of specialized expressions is most widely found for Self-motion, and least so for Emanation. At the same time, within a single language the same pattern is not necessarily exhibited for both Deixis and Path. Newar, for example, can be characterized as employing neutral coding for Path but specialized coding for Deixis. As an illustration, the patterns exhibited by Newar and Chinese are given in Tables 1 and 2.

Table 1. Newar expressions of Path and Deixis

Path and Deixis forms / Representation type	Path		Deixis	
	specialized forms	neutral forms	specialized forms	neutral forms
Self-motion	restricted (V)	common (P, Adv, VPref)	common (V)	exist but not used often
Caused motion	absent		common (V)	
Emanation	absent		absent	

Table 2. Chinese expressions of Path and Deixis

Path and Deixis forms / Representation types	Path		Deixis	
	specialized forms	neutral forms	specialized forms	neutral forms
Self-motion	common (V)	common (Dir. Comp, PP)	common (V)	common (Dir. Comp, PP)
Caused motion	restricted (V)		absent	
Emanation	absent		absent	

6. Concluding remarks

The present chapter has argued that path-coding devices can be classified based on their neutrality or specialization for the three types of motion event representations: Self-motion, Caused motion, and Emanation. Languages can be characterized in terms of how dominantly they prefer neutral or specialized coding. This typology classifies languages in terms of two opposing poles, and no need exists for an independent third type. It nicely captures the patterns of intralinguistic variation in terms of the coexistence of two (rather than three) coding patterns. There are crosslinguistically common tendencies in the use of specialized coding, which is most widely available for Self-motion and least widely for Emanation, within and across languages. A similar tendency is found for the coding of Deixis. However, Deixis can exhibit a different pattern from Path within a single language, suggesting the need for the separation of the two. These findings call for the examination of other languages for further verification.

Abbreviations

ACC: accusative	ALL: allative	CAUS: causative	CONV: converb
CM: concatenative	DEC: declarative	DEF: definite	DIST: distal
DU: dual	ERG: ergative	FUT: future	GEN: genitive
ILL: illative	INCL: inclusive	LOC: locative	NF: non-feminine
NOM: nominative	NPST: non-past	OBL: oblique	OM: object marker
PL: plural	POSS: possessive	PRS: present	PRT: particle
PST: past	SG: singular	SRC: source	TOP: topic
TRF: transferentive			

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