An Etymological Note on Verbs Which Show Locative Alternation

Fumiko Yoshikawa
(Received on October 11, 2007)

1.   Introduction

This paper treats locative alternation from a diachronic and etymological viewpoint.

(1)   a. Bees are swarming in the garden.
      b. The garden is swarming with bees.   (Salkoff 1983: 288)

This kind of alternation has been described in many previous studies including Salkoff (1983) and Pinker (1989).   Salkoff adopts the sentence (1) a. in the title of his paper, 'Bees Are Swarming in the Garden: A Systematic Synchronic Study of Production'.

Example (1) is an example of locative alternation in an intransitive verb, but it is also seen in transitive verbs.   The sentences with a locative noun as their subject are usually accompanied by the preposition *with*, but other prepositions are also possible (cf. Salkoff 1983, section 1.2).

(2)   a. Fish abound in this river.
      b. This river abounds in fish.   (Salkoff 1983: 293)

Although a large number of studies have been made on this kind of alternation from the viewpoint of generative grammar, and still more papers are being produced through lexical conceptual approaches, little is known about

diachronic research on it.[1]　Salkoff (1983) collected an enormous number of examples related to this kind of alternation, and discussed possible conceptual variations of noun phrases with these constructions and of prepositions with these constructions and restrictions in their uses, but his research is a synchronic one, as he says in the subtitle of his paper.　In the latter part of his article, Salkoff (1983: Section 6) also shows high productivity in these types of constructions by a metaphorical extension, but has not connected the historical development of meanings with those verbs and adjectives.　This paper traces the routes of the etymological development of verbs that show the locative alternation, referring to *The Oxford English Dictionary* (hereafter *OED*) and the *Middle English Dictionary* (hereafter *MED*).　The verbs that show locative alternation originate in different language branches and came into English in different periods.　The verbs examined are mainly taken from Pinker (1989: 126, 127) and some from Salkoff (1983).　Salkoff (1983) accumulates extensive verbs related to locative alternation, but he does not organize those verbs clearly.　On the other hand, Pinker (1989: 126) cogently classifies verbs though the verbs in his list are transitive, which is because he thinks that semantic properties to show locative alternation are common to both transitive and intransitive verbs.[2]　As a pilot study of diachronic research on locative alternation, this paper examines all of the verbs on Pinker's list which show locative alternation and adds the examination of the most typical intransitive verbs related to locative alternation in present-day English from Salkoff (1983).　The pos-

---

1)　Cf. Salkoff (1983), Fukui, Miyagawa & Tenny (1985), Kageyama (1980) and Kishimoto (2001).

2)　See Pinker (1989: 68).　Some think that it is not clear whether the properties to show locative alternation are common to both transitive and intransitive verbs.　Cf. Fukui, Miyagawa & Tenny (1985).

sibilities of locative alternation in Middle English are examined concerning verbs that show locative alternation in present-day English, and the features that are both common and different between uses of the verbs in Modern English and their uses in the past are discussed.   We are not concerned in this paper with verbs which were loaned rather recently in the Modern English period, even though they show location alternating in present-day English.

2.   Locative Alternation in Transitive Verbs

Pinker (1989: 124–130) treats locativizable transitive verbs in section 4.4.2.   First, he divided them into two: (1) the content-oriented verbs, which naturally takes the content as their direct object, and can be accompanied by *into/onto*; (2) The container-oriented verbs, which naturally take locational goal as their direct object, and can be accompanied by *with*. Pinker, then, classified the content-oriented verbs and the container-oriented verbs into several criteria respectively, according to their semantic features.   His criteria, the examples of verbs included in them, and the distinction between alternating and nonalternating, are duplicated in the Appendix.   In the following sections, we focus on the criteria in which locative alternation can be seen, and check out the usage of each verbs mainly in the Middle English period.   The etymology of each verb was consulted in the *OED* and *MED*.

2.1.   *Smear*-type Verbs

Pinker's first criterion of alternating content-oriented verbs is defined as 'Simultaneous forceful contact and motion of a mass against a surface.' The verb *brush* (*brushen* in Middle English) has been used since the Middle English period, but the earliest citation in the *OED* in the sense of *brush (a*

thing) over 'to paint or wet its surface with a brush; to paint lightly', which is the definition close to the semantic features of this type of verb as defined by Pinker, is from the 17th century. With regard to *dab*, neither the *OED* nor *MED* shows any Middle English examples which mean 'to apply a substance onto a surface'. In Middle English, the verb *dubben* merely means 'to strike'. The *OED* shows that the verb has been used in the meaning of applying a substance onto a surface since the 16th century. It takes an instrument to strike with as its direct object as shown in quotation (3) but it also takes the locative goal as shown in quotation (4).

> (3) 1592 NASHE *P. Penilesse* (ed. 2) 13 b, A Painter..needs no more but wet his pencill, and dab it on their cheekes, and he shall haue vermillion and white enough. (*OED dab* v.^{1} 2. a.)
>
> (4) 1577 *Ludlow Churchw. Acc.* (Camden) 164 Item, to Humfreis for dabinge the churche house..vj d. (*OED dab* v.^{1} 8.)

The verb *daub* (*dauben* in Middle English) is a loanword from Old French (hereafter OF). The citations in the *MED* are all accompanied by the locational goal as direct object and often by the preposition *with*, and therefore the possibility of locative alternation in Middle English *dauben* is not confirmed and the prominent examples in Middle English do not show that the verb is content-oriented. The reason why the examples of *dauben* in Middle English do not show locative alternation may come from the fact that it is an OF loanword and from its meaning in Middle English 'to plaster or whitewash', which is slightly different from that in present-day English. However, the verb *plaster* (*plastren* in Middle English), whose meaning seems similar to *dauben*, shows locative alternation in Middle English too. You can see its alternation in quotations (5) and (6).

> (5) a1425 (c1395) *WBible(2)* (Roy 1.C.8) Amos 7.7: The Lord God

schewide to me these thingis; and lo! the Lord stondinge on a wal plastrid [vr. pargetid; *WB(1)*: terrid or morterd; L litum], and in the hond of hym was a trulle of masoun. (*MED plastren* v. 3. (b))

(6) c1450 *Burg. Practica*[3] (Rwl D.251) 212/20, 21: Stampe þe herbe and playster yt þeron..Wete a cloth in þe iuce of pety morell and vynagyr, and playster yt on þe leuer. (*MED plastren* v. 1. (b))

With regard to *rub* (*rubben* in Middle English), all the citations in the *OED* (see definition 9) with its content-oriented use meaning 'to apply something' are from the 19th century. One of the possible questions on these criteria and their lists of verbs is that the senses of a verb that belong to different criteria depending on their senses may interplay with each other though it is hard to be sure of the answer to this question. The verb *rub* is a verb of this type. It is also used as a verb related to the 'empty alternation' in present-day English (Pinker 1989: 129–130). We say 'He rubbed the mud off his boots' and 'He rubbed his boots'. In these examples, the motion of rubbing does not apply anything to the surface but takes something away from it.

The verb *slather* came into English in the 19th century.[4] The native verb *smear* (*smeren* in Middle English) does not seem to show locative alternation in Middle English. The *MED* gives many citations accompanied by a locational goal as direct object and the preposition *with*, but it does not show any Middle English transitive examples with a substance as direct object, though it gives examples from Late Old English or Early Middle English as an intransitive verb in the use of 'smear over — mid —'.

(7) c1175(?OE) *Bod. Hom.*[5] (Bod 343) 58/31: He..smirede mid þam

---

3) *John of Burgundy's Practica Phisicalia* (ME version).

4) See the *OED slather* v.

5) *Homilies* in MS Bodley 343.

lame ofer þæs blindan ea3en.   (*MED smeren* v. 1. (a))

Quotation (7) might be construed as a form in which a word to express 'himself' as its direct object has been omitted.   In any case, these citations do not give proof to be a content-oriented verb.   With regard to the verb *smudge*, both the *OED* and *MED* give only one identical example of its gerund in Middle English (See quotation (8)).   Therefore their use in Middle English is not clear.

> (8) ?a1425 *Const.Masonry(1)*[6)] (Roy 17.A.1) 744: Kepe thyn
>   hondes..From fowle smogynge [vr. fylynge] of thy towel.
>   (*MED smoginge* ger.)

The verb *spread* is a native verb and seems to show locative alternation in Middle English though the number of examples in the *MED* followed by a location as direct object is few.

> (9) (a1393) Gower *CA* (Frf 3) 5.6891: Hire kertell and hire mantel
>   eke Abrod upon his bed he spredde.   (*MED spreden* v. 1. (a))
> (10) (a1382) *WBible(1)* (Bod 959) Prov. 7.16: I haue arayed with
>   cordis my litle bed & sprad [L stravi] with peyntid tapitis of
>   egipt.   (*MED spreden* v. 8. (a))

The verb *spread* clearly shows the nature as a content-oriented verb, which often takes a substance as direct object and prepositions *over*, *upon*, *on* and *onto*.   The examples of the verb *streak* (*streken* in Middle English) in the sense of 'to spread' are few in Middle English, so its use in Middle English is not clear.   It seems to be a content-oriented verb (See quotation (11)).

---

6) *Constitutions of Masonry* (1).

(11)   ?c1425 *Arun.Cook.Recipes*[7] (Arun 334) 471: Then take the same stuff and streke above the trenchours al hote.   (*MED streken* v.(2) (b))

2.2.   *Heap*-Type Verbs

The second criterion in the content-oriented verbs is defined as 'Vertical arrangement on a horizontal surface' by Pinker (1989: 126).   The verb *heap*, a native word, takes a substance as direct object; that is, it shows the nature of a content-oriented verb.   However, no Middle English example followed by a locational theme as direct object is found in the *OED* and *MED*.

(12)   a1425(?a1400) <u>RRose</u> (Htrn 409) 5771: But late us..speke of hem that in her toures Hepe up hir gold.   (*MED hepen* v. 1. (c))

The verb *stack* (*stakken* in Middle English), which is an example of conversion from an Old Norse (hereafter ON) origin noun, also appears to be a content-oriented verb though the citations in the *MED* are scarce.   On the contrary, the verb *pile*, which was converted from its noun originating in French, seems to be a container-oriented verb, which takes a locational goal as direct object and is accompanied by the preposition *with*.   With regard to this verb also, the citations in the *MED* are only a few.

(13)   a1450(?1409) *Vision Staunton*[8] (Roy 17.B.43) 70: And there y saw dyvers pressis ipiled wyth clothis.   (*MED pilen* v.(3) (b))

(14)   (1446) *Doc*. in Morsback *Origurk*.[9]   32: William Palmere schall..bringe home all the heie, and stakke it in seche an hous.   (*MED stakken* v. (a))

---

7)   Cookery Recipes in BL Arundel 334.

8)   *St. Patrick's Purgatory* (*Vision of William Staunton*).

9)   *Documents Illustrating 14th- and 15th-Century Regional Language*.

2.3. *Splash*-Type Verbs

Most of the verbs belonging to Pinker's third criterion, 'Force is imparted to a mass, causing ballistic motion in a specified spatial distribution along a trajectory' were introduced into English in the Modern English period: *inject* came into English at the end of the 16th century, *spatter* in the 16th century, *splash* in the 17th century, *splatter* in the 18th century, and *spray*, a representative of verbs which demonstrate locative alternation, in the 19th century.   Only *sprinkle* (*sprenklen* in Middle English) and *squirt* (*squirten* or *squirt* in Middle English) in the verb list are included in Middle English verbs and both are Germanic, but with regard to the verb *squirt*, both the *OED* and *MED* provide only one identical Middle English example as an intransitive verb.

> (15) a1475 Russell *Bk.Nurt.*[10] (Hrl 4011) 293: With youre mouthe ye vse nowþer to squyrt nor spowt.   (*MED squirten* v.)

The verb *sprinkle* (*sprenklen* in Middle English) must also have been a content-oriented verb in Middle English.   There are many citations accompanied by *in* or *on* in the *MED*, and the verb shows locative alternation as is shown in quotations (16) and (17).

> (16) ?a1425 *Mandev.(2)* (Eg1982) 85/14: þai sla þaire childer..and takes þaire blude and sprenklez it apon þaire mawmets. (*MED sprenklen* v.(1) (a))
> (17) a1500(?c1414) ?Brampton *PPs.(1)*[11] (Sln1853) p. 23: Sprenkle me, Lord, with watyr of terys, That myn herte be pourgyd clene.   (*MED sprenklen* v.(1) (b))

---

10) John Russell, *Book of Carving and Nurture*.
11) ?Thomas Brampton, *Metrical Paraphrase of the Penitential Psalms* (1).

2.4. *Scatter*-Type Verbs

The verb *scatter* (*scateren* in Middle English) has been used since the Early Middle English period.   In Middle English also it was a content-oriented verb.

> (18) c1450 *3 KCol.(2)*[12] (Add 31042) 697: In that lande was skateride heresy, Devisyone, debate, and false envy.   (*MED scateren* v. 1. (b))
>
> (19) (a1382) *WBible(1)* (Bod 959) Prov.21.20: Desirable tresor & oile in þe dwellyng place of þe ri3twis & þe vnprudent man shal scateren it.   (*MED scateren* v. 3.)

This verb can be followed by abstract concepts, as seen in quotation (18).   However, the examples accompanied by a locational theme as direct object are not found, that is, no proof of its locative alternation in Middle English are given.

The verb *bestrew* (*bestreuen* in Middle English) is a native word, but only a few citations can be seen in the *MED*.   It does not seem to be a content-oriented verb because its Middle English examples are followed by a location as direct object and the preposition *with*.   The *OED* also shows an Old English example with the preposition *mid*.

> (20) *a*1000 *Job* ii. 12 Ettm. 5. 38 Hi mid duste heora heafod bestreowodon.   (*OED bestrew* v. 1.)

The verb *sow* (*souen* in Middle English), which is also a native word, clearly shows locative alternation, as seen in quotations (21) and (22).   It also serves as an intransitive verb implying that the scattered substances are seeds (See quotation (23)).

---

12) *The Three Kings of Cologne* (2).

(21) c1400(a1378) *PPl. B* (LdMisc 581) 19.270: Grace gaue greynes, þe cardynales vertues, And sewe [vrr. sewen, swee; *C* vrr. seu3, sowe] it in mannes soule.   (*MED souen* v.(1) 2. (b))

(22) (a1393) Gower *CA* (Frf 3) 4.1837: With gret salt the lond he siew.   (*MED souen* v.(1) 3. (a))

(23) (a1382) *WBible(1)* (Bod 959) Gen.26.12: Ysaac forsoþ sowide in þat lond, & he fonde þat 3ere þe hundreþfold.   (*MED souen* v.(1) 3. (a))

Another native verb *strew* (*streuen* in Middle English) also shows locative alternation as shown in quotations (24) and (25).

(24) (c1384) *WBible(1)* (Dc 369(2)) Mat.21.8: Ful muche cumpanye strewiden her clothis in the wey.   (*MED streuen* 1. (a))

(25) (a1393) Gower *CA* (Frf 3) 4.3022: The chambre is strowed up and doun With swevenes many thousendfold.   (*MED streuen* 4. (c))

2.5. *Pack*-Type Verbs

Now we start to observe container-oriented verbs.   The first criterion of the container-oriented verbs is defined by Pinker as 'A mass is forced into a container against the limits of its capacity' (1989: 126).   In this sense, the citations under the headword of *pakken* in the *MED* (*pack* in present-day English) seem to denote that the verb is a container-oriented verb also in Middle English, though we cannot see any examples accompanied by *mid* or *with*.

(26) (1423) *RParl.*[13]   4.256a: The barrell of Heryng and Eles, xxx Galons full pakked; the but of Samon iiiixx iiii Galons full pakked.   (*MED pakken* v. (b))

The verb *cram* (*crammen* in Middle English) is a native word and appears

13) *Rolls of Parliament.*

to be container-oriented also in Middle English.　The verb *crowd* (*crouden* in Middle English) is also a native word, but the prominent meanings in Middle English are not container-oriented.　It is mainly used in the senses of 'to jostle' as an intransitive verb and 'to drive (somebody)'.　Therefore we are not given sufficient examples to observe locative alternation in this verb.

> (27)　(c1390) Chaucer *CT. Pard.* (Manly-Rickert) C.348: Thanne shewe I forth my longe cristal stones, Ycrammed [vr. I-crommed] ful of cloutes and of bones.　(*MED crammen* v. (a))
>
> (28)　a1500 *Wars Alex.* (Dub 213) 2937: He clyght vp a cupe & cromys [Ashm: putis] in hys bosom.　(*MED crammen* v. (b))

　　The verb *stuff* (*stuffen* in Middle English) is a loanword from OF and is clearly container-oriented in Middle English as well, though it is used in a sense rather similar to Pinker's fourth definition, 'Addition of an object or mass to a location causes an esthetic or qualitative, often evaluative, change in the location.' It is often used in a context to strengthen the defenses in a castle or in a city with soldiers (See quotation (29)).　The *MED* gives a large number of citations with this verb, but no example followed by a substance as direct object is found.　The rest of the listed verbs under this criterion do not exist in the Middle English period.　The verb *jam* is from the 18th century and *wad* is from the 17th century.

> (29)　c1400(?1380) *Cleanness* (Nero A.10) 1184: Þe borȝ watz..stoffed wythinne wyth stout men to stalle hem þeroute.　(*MED stuffen* v.(1) 1. (a))

2.6.　*Load*-Type Verbs

The other criterion that participates in locative alternation is defined as 'A mass of a size, shape, or type defined by the intended use of a container

(and not purely by its geometry) is put into a container, enabling it to accomplish its function.' The verb *load* (*laden* in Middle English), which is from Old English *hladan*, takes part in locative alternation and most of the citations in the *MED* take a location as direct object.

> (30) c1425(a1420) Lydg. *TB* (Aug A.4) 1.4403: Her schippes wern with golde & tresour lade. (*MED laden* v. 1. (b))
>
> (31) c1436 *Ipswich Domesday(2)* (Add 25011) 103: ჳif the foreynes will laden [F charger] her fyssh, they shulden laden in pleyn market out of house. (*MED laden* v. 2. (a))

The Middle English verb *laden* also has a use related to '*empty* alternation' meaning 'to draw out (water)'.

> (32) a1500(?c1450) *Merlin* (Cmb Ff.3.11) 37: Thei hadde a-wey the erthe, and fonde the water, and dede it to laden oute. (*MED laden* v. 4. (a))

In the sense of 'to package (sth.)', the verb *pack* (*pakken* in Middle English) takes the substances as direct object and is often accompanied by the adverb *together*.

> (33) c1400(?a1384) *PPl.C* (Hnt HM 137) 17.329: Then he..packeþ [vr. pekk] hem togederes. (*MED pakken* v. (a))

In Middle English, the verb in this sense appears to limit the kind of containers chiefly to ones for one's belongings. The verb *pakken* appears to take part in locative alternation when we put its examples side by side with the examples in the sense of 'to cram (a container with something)'. In present-day English the verb shows locative alternation in both uses.

The verb *stock* (*stokken* in Middle English) is a Germanic verb converted from its noun in the Middle English period. Its main use in Middle

English takes a person as direct object meaning 'to imprison somebody', so it is not used in the sense of 'to store' discussed in Pinker (1989: 126, 127).

> (34)　a1425(c1385) Chaucer *TC* (Benson-Robinson) 3.380: That rather deye I wolde..now stokked in prisoun. (*MED stokken* v. (a))

3.　Locative Alternation in Intransitive Verbs

Pinker (1989: 124–130) mainly discussed locative alternation based on transitive verbs.　He seems to regard locative alternation in intransitive verbs as deduced from that in transitive verbs.[14]　However, previous studies on locative alternation do not provide clear explanations to cover both types of verbs.　Some comments on typical intransitive verbs, including *swarm* and *abound*, are given below.

　The verb *swarm*, which Salkoff (1983) adopts in his paper's title, originates in a native noun *swearm* in Old English.　*An Anglo-Saxon Dictionary* (Bosworth & Toller 1898) denotes that this verb also has something to do with its cognate verb *swirman*; and *abound* (*abounden* in Middle English) is a loanword in the Middle English period from OF *abonder*, whose origin is Latin *abundare* which means 'to overflow'.[15]　The verb *swarm* (*swarmen* in Middle English) was often used of bees even in Middle English.　The *MED* does not show any example with a location as subject.　The *OED* gives only one container-oriented example from Middle English as an example of *swarm full of*.

> (35)　c1410 Chaucer *CT.Sum.* (Hrl 7334) D.1693: Right so as bees swarmen [vr. swermen] out of an hyue, Out of þe deueles ers þay gonne dryue.　(*MED swarmen* v. (a))

---

14)　See Pinker (1989: 68).
15)　Cf. The *OED*, *MED*, Bosworth & Toller (1898) and Terasawa (1997).

(36) 1482 *Monk of Evesham* (Arb.) 40 The lenthe of that valey..was so full of fowyls, as hyues swarmyn ful of bees.   (*OED swarm* v.[1] 4. b.)

On the contrary to *swarm*, many examples with a location as subject can be seen in the verb *abound*.   The most eminent schema is 'one's heart abounds in a feeling'.   This verb also participates in locative alternation in Middle English.   The reason why this type of sentence comes into prominence might be attributed to the fact that the major genre in Middle English consists of religious works.

(37) (c1395) Chaucer *CT.Mch.*(Manly Rickert) E.1286: Wel may his herte in ioye and blisse habounde.   (*MED abounden* v.(1) 2. (b))
(38) (c1384) *WBible*(1) (Dc 369(2)) Phil.1.26: That 3oure thankyng [L gratulatio] habounde in Crist Jhesu.   (*MED abounden* v.(1) 1. (b))

The verb *sing*, a native verb, is known to participate in locative alternation in present-day English, but the *OED* and *MED* do not cite any quotation with a location as its subject.   However, it is doubtful whether Middle English *singen* did not permit locative alternation in the Middle English period because the *OED* does not give any examples of this kind, even in Modern English.   The occurrence of the sentence with *sing* accompanied by a locational subject must be restricted contextually.   The intransitive verb *dance* (*dauncen* in Middle English), which is from OF, is also known to take part in locative alternation in Modern English, and the *OED* and *MED* does not give any Middle English examples with locational subject, though the *OED* cites an example which appears with a locational subject from the early 18th century.

(39) 1703 MOXON *Mech. Exerc*. 135 Care must be taken that the Bressummers and Girders be not weakned more than needs, lest

the whole Floor dance.　(*OED dance* v. 3)

In fact, this example does not assure the verb was used with a locational subject in the 18th century because it is not accompanied by any pre-positional phrase with substances which actually danced.　We cannot reject the possibility that the floor is regarded as a dancing substance by the writer.

　Some onomatopoeic intransitive verbs such as *buzz*[16] and mimic verbs such as *dazzle*,[17] which take part in locative alternation in present-day English, do not leave clear traces of their use as verbs in Middle English yet. This shows commonality with the *splash*-type transitive verbs listed by Pinker (1989: 126).　The verb *flash*, which is from the OF noun *flashe*,[18] is used mainly to describe a kind of light emission, but the prominent use of *flashen* seen in the *MED* is in the sense of 'to sprinkle or splash (water on something)'.　Therefore, it seems to be a content-oriented verb in Middle English and the *MED* gives an example with locational subject in the sense of 'to burst into flame' (*MED flashen* v. (d)).

> (40)　a1500 *Wars Alex.* (Dub 213) 1133: With þat þe femand flode [of tears] flasshed in hys eghen.　(*MED flashen* v. (a))
> (41)　c1450(?a1400) *Destr.Troy* (Htrn 388) 12498: A thoner.. þrublet in the skewes..All flasshet in a ffire the firmament ouer.　(*MED flashen* v. (d))

　The verb *drip* (*dripen* or *drippen* in Middle English), which is from Old English, allows locative alternation in Middle English as well as in Modern

---

16)　The *OED* gives one citation from the 14th century.　Other citations are all from the 16th century and so forth.

17)　The *OED* gives one citation from the 15th century, but the *MED* does not have any entry for *dazzle*.

18)　Cf. *MED flashen* v.

English.

(42) c1475(?a1449) ?Lydg. *Pag. Knowl*. (Trin-C R.3.21) 136: The moone mutable, now glad & now drypyng, And Gere Venus, full of new fangylnes, Makyn men vnstable. (*MED dripen, drippen* v. (a))

(43) c1450 *Med.Bk.(2)* (Add 33996) 203: Tak suet, rosyn [etc.]..& þerinne dryppe [Roy: dippe] þy clout. (*MED dripen, drippen* v. (d))

Most of the intransitive verbs examined above showed that the possibility of alternation is still small in the Middle English period, and, in addition to that, the origins of those intransitive verbs vary. For example, the verb *abounden* originates in Latin *abundum* and came into English through OF, and *singen* is a native verb. Therefore, at present, there is not much hope that we can give a systematic explanation to classify these intransitive verbs.

4. Conclusion

The result of this research did not illustrate any clear-cut outline of the development of locative alternation. Some Middle English verbs show locative alternation as well as in present-day English (refer to *plastren, spreden, souen, streuen, laden, packen, swarmen, abounden, flashen* and *drippen*), but many of the verbs that take part in locative alternation in present-day English do not give us any examples of one of the alternation pairs in Middle English. To make matters worse, we cannot be confident about the absence of alternation. This is one of the limitations in diachronic corpus-based studies. More extensive research might lead us to another conclusion.

This research also reminded me of the following unanswerable questions related to study using diachronic corpora: whether the minor structures we found were really natural in those days, whether the syntactic structures

these verbs show might be verbatim translations of their original language structures, or whether the most prominent forms in the data always match its syntactically or semantically default forms.　In most cases, native transitive verbs from Old English in the list such as *spreden*, *souen*, *streuen* and *laden*, appear to take part in locative alternation in Middle English, but we do not find a container-oriented example with *hepen* in Middle English.　*Hepen* is a native verb but seems not to participate in locative alternation in Middle English.

　　However, at least, we can say that most of the verbs that take part in locative alternation today were borrowed in the Middle English period, and in their early days they tended to take only one side of the alternation, that is whether they are content- or container-oriented.　With this point, some verbs had a different directionality in Middle English from present-day English.　It remains unclear why many of the alternating verbs in present-day English were adopted in and after the Middle English period. Another question which arose concerning the verbs listed in Pinker (1989: 126, 127) is that there may have been other verbs that took part in locative alternation in Middle English that have become obsolete.　Also, this study has not examined syntactic questions posed by previous works on synchronic study of locative alternation in present-day English such as the relationship with ergativity or with other alternations.　In addition, the semantic variations of contents and containers as arguments of these verbs and as the objects of prepositions accompanied by these verbs have not been discussed.　We should also wonder if the loanwords adopted from OF verbs were really naturalized as English verbs in the Middle English period.　If they were not completely naturalized at that time, their syntactic behavior might have been influenced by their degree of naturalization.　We have also left the discussion of non-alternating verbs listed in Pinker (1989:

126, 127) for a future occasion.　Therefore, it goes without saying that more extensive investigation is needed to describe the general view on locative alternation in Middle English.

Appendix

'The content-oriented or *into/onto* verbs' by Pinker (1989: 126):

1. Alternating.　Simultaneous forceful contact and motion of a mass against a surface: *He smeared grease on the axle / He smeared the axle with grease*. Includes *brush, dab, daub, plaster, rub, slather, smear, smudge, spread, streak*.　For many of the verbs a resulting shape is specified, usually corresponding to the deverbal noun: *a smear*, *a smudge*, and so on (Rappaport and Levin, 1985) (Refer to 2.1. *Smear*-type Verbs).[19]

2. Alternating.　Vertical arrangement on a horizontal surface: *He heaped bricks on the stool / He heaped the stool with bricks*.　Includes *heap, pile, stack* (Refer to 2.2. *Heap*-type Verbs).

3. Alternating.　Force is imparted to a mass, causing ballistic motion in a specified spatial distribution along a trajectory: *She splashed water on the dog / She splashed the dog with water*.　Includes *inject, spatter, splash, splatter, spray, sprinkle, squirt* (Refer to 2.3. *Splash*-type Verbs).

4. Alternating.　Mass is caused to move in a widespread or nondirected distribution: *The farmer scattered seeds onto the field / The farmer scattered the field with seeds* (the latter is marginal for some speakers).　Includes *bestrew, scatter, sow, strew* (Refer to 2.4. *Scatter*-type Verbs).

5. Nonalternating.　A mass is enabled to move via the force of gravity: *She dribbled*

---

19)　Section titles to be referred to are added by the present author in parentheses.

*paint onto the floor / *She dribbled the floor with paint.*   Includes *dribble, drip, drizzle, dump, ladle, pour, shake, slop, slosh, spill.*

6. Nonalternating.   Flexible object extended in one dimension is put around another object (proposition is *around*): *He coiled the chain around the pole / *He coiled the pole with the chain.*   Includes *coil, spin, twirl, twist, whirl, wind.*

7. Nonalternating.   Mass is expelled from inside an entity: *He spat tobacco juice onto the table / *He spat the table with tobacco juice.*   Includes *emit, excrete, expectorate, expel, exude, secrete, spew, vomit.*[20]

'The container-oriented or *with* verbs' by Pinker (1989: 126, 127):

1. Alternating.   A mass is forced into a container against the limits of its capacity: *They packed oakum into the crack / They packed the crack with oakum.*   Includes the wadding sense of *pack*, as well as *cram, crowd, jam, stuff, wad* (Refer to 2.5. *Pack*-type Verbs).[21]

2. Alternating.   A mass of a size, shape, or type defined by the intended use of a container (and not purely by its geometry) is put into the container, enabling it to accomplish its function: *Max loaded the gun with bullets / Max loaded bullets into the gun.*   Includes *load, pack* (what one does to suitcases), *stock* (what one does to shelves) (Refer to 2.6. *Load*-type Verbs).

3. Nonalternating.   A layer completely covers a surface: *They inundated the field with water / *They inundated water onto the field.*   The layer may be liquid, as in *deluge, douse, flood*, and *inundate*, or solid, as in *bandage, blanket, coat, cover, encrust, face, inlay, pad, pave, plate, shroud, smother, tile.*   *Line* and *edge* are similar, except with one less dimension; *fill* and perhaps *occupy* are also similar, with one more dimension.

4. Nonalternating.   Addition of an object or mass to a location causes an esthetic or qualitative, often evaluative, change in the location: *They adorned the gift with ribbons / *They adorned ribbons onto the gift.*   Includes *adorn, burden, clutter, deck, dirty, embellish, emblazon, endow, enrich, festoon, garnish, imbue, infect, litter, ornament, pollute, replenish, season, soil, stain, taint, trim.*

5. Nonalternating.   A mass is caused to be coextensive with a solid or layerlike medium: *She soaked the sponge with water / *She soaked water into the*

---

20)   The possibility of an eighth, nonalternating class including verbs such as *attach, fasten, glue, nail, pasten, pin, staple, stick* and *tape* is also pointed out.   See Pinker (1989: 126).

21)   Section titles to be referred to are added by the present author in parentheses.

sponge.   The mass may be composed of layers or strings, as in *interlace, interlard, interleave, intersperse, interweave, lard, ripple, vein,* or of liquids, as in *drench, impregnate, infuse, saturate, soak, stain (what one does to wood), suffuse.*

6. Nonalternating.   An object or mass impedes the free movement of, from, or through the object in which it is put: *I clogged the sink with a cloth / *I clogged a cloth into the sink; She bound him with rope / *She bound rope onto/around him.*   Includes verbs pertaining to liquids in containers, as in *block, choke, clog, dam, plug, stop up*, and bound movable objects, as in *bind, chain, entangle, lash, lasso, rope.*

7. Nonalternating.   A set of objects is distributed over a surface: *They studded the coat with metal stars / *They studded metal stars onto the coat.*   Includes *bombard, blot, dapple, riddle, speckle, splotch, spot, stud.*   The type of object is specified by the verb (a splotch, a hole, a stud, etc.).[22]

References

Bosworth, Joseph & T. N. Toller (eds.). (1898).   *An Anglo-Saxon Dictionary Based on the Manuscript Collections of Joseph Bosworth*. T. N. Toller, *Supplement*, 1921. Alistair Campbell, *Enlarged Addenda and Corrigenda to the Supplement*, 1972. Oxford: Oxford University Press.

Fukui, Naoki, Shigeru Miyagawa, & Carol Tenny. (1985).   'Verb Classes in English and Japanese: A Case Study in the Interaction of Syntax, Morphology and Semantics'. Lexicon Project Working Papers #3. MIT Center for Cognitive Science: Cambridge, Mass.

Kageyama, Taro. (1980).   'The Role of Thematic Relations in the *Spray Paint* Hypallage', *Papers in Japanese Linguistics* 7, 35–64.

Kishimoto, Hideki. (2001).   '*Kabenuri Koobun* ('Spray Paint' Alternation).' in Taro Kageyama (ed.), Nichiei-taishoo*: Dooshi no Imi to Koobun (A Comparative Study of Japanese and English Verbs: Verb Semantics and Constructions).* Tokyo: Taishukan, 100–126.

Kurath, Hans, Sherman M. Kuhn & John Reidy (eds.). (1952–2001).   *Middle English Dictionary* [*MED*].   Ann Arbor: University of Michigan Press.

Pinker, Steven. (1989).   *Learnability and Cognition: The Acquisition of Argument Structure*.   Cambridge, Mass.: MIT Press.

22)   Pinker (1989: 127) also cites *string* and *wrap* as "alternating verbs that have a unique geometry".

Salkoff, Morris. (1983). 'Bees are Swarming in the Garden: A Systematic Synchronic Study of Productivity'. *Language* 59, 288–346.

Simpson, John A. & Edmund S. C. Weiner (eds.). (1989). *The Oxford English Dictionary* [*OED*]. 2nd edition, Oxford: Oxford University Press.

Terasawa, Yoshio. (ed.). (1997). *The Kenkyusha Dictionary of English Etymology*. Tokyo: Kenkyusha.

Visser, F. Th. (1963–1973). *An Historical Syntax of the English Language*, 4 vols, Leiden: E. J. Brill.