ANALYSIS BY FUSION

MORRIS SALKOFF
*Université Paris 7 - L.A.D.L.**

1. Introduction

I shall examine here the properties of sentences of the following type:

(1) a. *Max pushed his way through the crowd*
   b. *Max charmed his way into her affections*
   c. *Acid etched its way across the metal surface*
   d. *The car spiraled its way down the steep road*
   e. *The novel crawls its way to an unhappy denouement*

These sentences will be noted as follows:

(2) *N0 V Poss-0 way Prep N2*

where *N0* is the subject, *Poss-0* a possessive pronoun referring obligatorily to the subject, *Prep N2* is the prepositional phrase which follows *way*, and *Prep* is a variable preposition.

Sporadic examples of this kind of sentence can be found in commercial dictionaries under the entries of some verbs of the paradigm. For example, I find the following sentences in the Random House College Dictionary, revised edition, 1975:

(3) a. *He's used to charming his way out of [...] trouble* (s.v. *charm*, §12)
   b. *He maneuvered his way into the confidence of the enemy* (s.v. *maneuver*, §5)

In the Oxford English Dictionary, I find:

   c. *[...] ask his way to St. James* (s.v *way*, §4a)
   d. *Rudy Vallee crooned his way right into the heart of the nation* (Supplement, s.v. *croon*)

And in the Merriam-Webster's 3rd International Dictionary, I find

> e. *wangle his way into the crowd* (s.v. *wangle*)
> f. *handed his way through the trees* (s.v. *hand*)

From a methodological point of view, the appearance of such examples in a dictionary should imply either that a complete list of these verbs (with examples) is available, or that the lexicographer has a rule for deciding which verbs can appear in this kind of sentence. Since neither of these is the case, the lexical work remains necessarily incomplete and anecdotal.

These sentences also occur in literary texts for effect, *e.g.*, *Lorenzo de Medicis, who's determined to murder his way into history* ... (New York Times Book Review, Sept. 5th, 1983, p.51/1). However, no special attention has been paid to the verbs appearing in them, and so I decided to undertake an investigation into the distribution of these verbs.

The metaphorical use of verbs is well known. For example, *prune* can be used literally, in a concrete context, or metaphorically, in an abstract context:

> (4) a. *The gardener pruned the tree of its dead branches*
>   b. *The author pruned the text of its outdated references*

In the same way, a verb of the paradigm (2) can be used literally, as in (1a) and (1c), or metaphorically, as in (1e). Very few of the verbs of the paradigm can take an abstract subject yielding a metaphor, as in (1e), and these metaphoric sentences have the same properties as the non-metaphoric sentences of the paradigm. Hence, metaphor is an independent phenomenon unrelated to the syntactic properties of the sentences of the paradigm.

1.1. The paradigm

There are several unusual features of these sentences. The relationship between the groups *Poss-0 way* and *Prep N2* is not immediately clear. We note that for most of the verbs in the paradigm, the deletion of the group *Prep N2* does not yield an acceptable sentence:

> (5) a. **Max (pushed, charmed, hunched) his way.*

Furthermore, we see that the group *Prep N2* does not modify the group *his way*, for we cannot extract the sequence *his way Prep N2*:

> (5) b. **It was his way through the crowd that Max pushed*
>   c. **It was his way into her affections that Max charmed*

The status of *Poss-0 way* as direct object of *V* is not clear. It does not satisfy the test of extraction, as does a direct object such as *Jim*:

> (5) d. **It was his way that Max pushed through the crowd*
>   e. *It was Jim that Max pushed through the crowd*

However, the unacceptability of (5d) may be due to the obligatory coreference between *Poss-0* and *N0*:

> (5) f. **It was his bath that Max took*
>   g. **It was his mind that Max changed*

Rather, the possibility of extracting *Prep N2* indicates that the relevant syntactic subunit is the main verb (*charm, push*) followed by the sequence *his way*:

> (6) a. *It was through the crowd that Max pushed his way*
>   b. *It was into her affection that Max charmed his way*

The situation here resembles the behavior of certain sequences containing *make* plus a following nominalization of a verb *e.g.*, *allude*:

> (7) a. *Max made an allusion to her offer*
>   b. **It was an allusion to her offer that Max made*
>   c. *It was to her offer that Max made an allusion*

These are the so-called 'support verbs' (cf. M. Gross, 1981, Cattell, 1984); we shall see below how the sentences of the paradigm can be analyzed in terms of the support verb *make*.

Another indication that the main verb plus the following *way* forms a syntactic unit is the possibility of adding adjectival modifiers to *way*:

> (8) a. *The car spiraled its merry way down the road*
>   b. *The novel crawls its Proustian way to an uncertain ending*

These adjectives can be derived from a manner adverbial on the main verb plus *way*:

> (8) c. *The car spirals its way merrily down the road*
>   d. *The novel crawls its way in the manner of Proust...*

The same kind of sentence is observed with verbs taking other noun complements than *way*:

> (8) e. *John drank a cup of coffee quickly*
>   f. *John drank a quick cup of coffee*

g.   *John climbed the stairs wearily*

h.   *John climbed the weary stairs*

The number of verbs entering into this paradigm is quite large, and these sentences have many interesting and as yet unnoticed properties. The most important feature of this paradigm is its productivity: the verbs of the paradigm constitute an open class whose number is constantly increasing and cannot be limited a priori. Another type of productivity, and the open classes associated with it, has already been encountered with the sentence type *Bees are swarming in the garden* (Salkoff 1983).

I have used the same systematic method as that described in the latter paper; the verbs of a substantial English lexicon have .page been tested with respect to their acceptability in (1).[1] This study has led to the discovery of about 2,000 verbs in the paradigm, *i.e.*, about a fifth of the verbs of English. Note that verb form is not equivalent to verb use; the latter is constituted by the sentence containing a verb form and its subject and complement(s). A given verb form may have several verb uses, that is, several entries in the lexicon, *e.g.*, *The farm yields corn and wheat*, and *Max yielded to Lea*. These constitute two different uses or entries of the verb form *yield*; the same holds true for the majority of the verb forms I have collected. Since English verb uses have not yet been studied systematically, I have limited my investigation to my list of 10,000 verb forms. The size of this set, added to the number of those constantly entering the paradigm due to the processes of productivity, makes this paradigm a massive phenomenon.

1.2. Previous work

This paradigm has only rarely been mentioned in traditional grammars. H. Poutsma 1928 cites Wendt's observation on the reduction of *way* to *self*:

> "Wendt 1911 (Vol.I, p.197) mentions *way*, *ground* and *own* in such collocations as: to *fight*, *find*, *lose*, *thread*, *edge*, *feel*, *wind*, one's way; to *hold*, *maintain*, one's ground; to *hold* one's own, as words that may take the place of *self*."

The systematic investigation of the lexicon I have undertaken here shows that it is not *way* which takes the place of *self*, but rather the opposite: the substitution of *self* for *way* is possible for only a subgroup of verbs in the paradigm. It is therefore *way* that is basic, and not *self*. This seems also to be the view of Jespersen, who remarks (MEG, III, 12.23):

"One special case of the object of result is *to grope one's way* = 'to find (or make) one's way by (or while) groping'."

He adds further examples with the verbs *scramble, reason, stammer, shout* and the nonce verb *hand-shake* (*[He] had..hand-shaken his way through a brief..tour*). I have adopted and developed Jespersen's analysis using the verb *find* or *make* (cf. §3.1) as the most adequate analysis for this paradigm. We shall see that sentences containing nonce verbs (like *hand-shake* above) are one of the sources of productivity in this paradigm.

G. Kirchner 1951 has collected examples of close to 100 verbs of this construction from various literary sources. He notes (p. 154) that "there is no indication [in the OED, s.v. *way*, 7d] whatever of the seemingly unlimited applicability of the construction, which readily lends itself to the most diverse uses, and may be formed of practically any likely verb". His analysis goes no further than this remark, but he gives several interesting examples of the productivity of the paradigm (without taking note of the phenomenon).

. .This type of sentence has not been investigated in any of the theoretical frameworks currently used in linguistic investigations, so far as I can determine.

2.   Properties of the paradigm

2.1. Abstract and concrete contexts

Two principal types of sentence forms are found in the paradigm: those in which the noun in the prepositional phrase *Prep N2* is concrete, and those where it is abstract (to the extent that these two semantic notions can be defined), as in the following sentences.

(9)   a.   *N2con*: *Max inched his way across the ledge*

b.   *N2abs*: *Max beguiled his way into her good graces*

c.   *Max pole-vaulted his way into the annals of gymnastics*

Some verbs appear in both contexts:

(10) a.   *Max waltzed his way (across the floor, into a first prize)*

b.   *Max glad-handed his way (through the crowd, through the meeting)*

Other verbs can appear principally in an abstract context, like *beguile*,

charm, seduce, etc., or principally in a concrete context, like *inch, elbow, ricochet*. A metaphor is obtained when these verbs are used in the more unusual type of context, *e.g.*, when *crawl* is found in an abstract context, as in (1e).

The locative prepositions which occur most frequently in an abstract context are *into, out of, to*, and *through*:

(11) a. *Max reasoned his way to a simple conclusion*

  b. *Max baby-sat his way through college*

  c. *Max bullied his way (into that job, out of a fix)*

In a concrete context, all the locative prepositions can appear:

(12) a. *Max edged his way (across, down, over, along, off, etc.) the ledge*

  b. *The badger burrowed its way (through, into, out of, along) the wall*

The subject is a human noun *Nhum*, as in the examples above, for 80% of the verbs of the paradigm; it is an animate noun *Nanim* (insect or animal) for 10% of the verbs, a concrete noun *Nconc* for 15% of the verbs, and an abstract noun *Nabs* for 2% of the verbs:[2]

(13) a. *Nconc: The road spirals its way down the mountain*

  b. *Nanim: The crickets churred their way across the field*

  c. *Nabs: An obsession with death weaves its way through the text*

This difference among the verbs of the paradigm with respect to the intuitive notion of concrete and abstract contexts, as well as their distributional differences — such as kind of subject, and still other properties to be discussed —, will serve as a basis for separating some groups of sentences containing the same verb form into two or more distinct entries.

2.2. Reductions of *way*

The word *way* is unique to these sentences, and the substitution of even a close semantic synonym yields, for all of the verbs of the paradigm, an unacceptable sentence:

(14) a. *Max navigated his (way, *path, *course) through the straits*

  b. *Max drove his (way, *path, *road) across the U.S.*

However, the replacement of *Poss-0 way* by particular words, or its reduction to zero, yields acceptable paraphrases of subgroups of sentences in the

paradigm. Each such substitution or reduction is a property of the verb of the paradigm, and so constitutes one of the columns in the table of verbs.[3] The following are these properties, which I have verified for all the verbs in the table.

i) For a group of verbs, sequences containing a synonym of *way*, such as *path, entrance*, or the like, preceded by the indefinite article, can be substituted for *Poss-0 way*:

(15) a. *Max navigated (his way, a path) through the straits*

  b. *Max cut (his way, a path) through the brush*

  c. *Max forced (his way, an entrance) into the house*

ii) For a large group of verbs indicating the manner of locomotion, the sequence *Poss-0 way* can be pronominalized to *it*:

(16) a. *Max (bicycled, hiked, backpacked, canoed, etc.) (his way, it) across the country*

A smaller group of verbs appearing in an abstract context can also take this pronominalization:

(17) a. *Max hammed (his way, it) through the second act*

  b. *Max (fiddled, improvised) (his way, it) through the dance sequence*

The pronoun *it* therefore is the pronominalization of a unique sequence, *Poss-0 way*, which is reconstructible from the context.[4]

After *Poss-0 way* has been pronominalized to *it*, the group *Prep N2* can then be omitted:

(18) a. *Max (bicycled, caravaned, canoed, etc.) it.*

  b. *Max (hammed, improvised, fiddled) it.*

iii) *Poss-0 way* can also be reduced to *Pron-0 self*, where the latter is a reflexive pronoun referring to the subject:

(19) a. *Max ingratiated (his way, himself) into her affections*

  b. *Mary married (her way, herself) into big money*

  c. *The pulse of energy propagated (its way, itself) through the conductor*

iv) For another group of verbs, *Poss-0 way* can be omitted (the symbol *E* represents the null sequence):

(20) a. *The fireworks arched (their way, E) across the sky*

  b. *Max hiked (his way, E) across the U.S.*

c. *Max bellied (his way, E) up to the counter*

The decision that this omission of *way* yields a paraphrase of the sentence with *way* is complicated by the existence of a middle transformation for many verbs of the paradigm. Thus, we observe the following sentences for *assimilate*:

(21) a. *The immigrants have assimilated (their way, themselves) into French society*

b. *The immigrants have assimilated into French society*

Here, (21b), without *way*, can be obtained by the middle operating on the sentence:

(22) *(Something) assimilated the immigrants into French society*
= *The immigrants assimilated into French society*

The choice for *assimilate*, then, is that (21b), without *way*, arises either from the omission of *way*, or from the middle transformation. I have included in the group described by the reduction *way* =: *E* only such sentences as (20), which cannot be reached by the middle.

We shall see in a forthcoming study that this group constitutes an interesting subset of the paradigm that can be used to define the notion of 'verb of movement'.

2.3. The verbs of the paradigm

The intransitive verbs appearing in sentences (1) all take as object either *E* (the empty sequence) or *Prep N2*. The former are verbs such as *sleep, baby-sit, laugh, etc.*:

(23) a. *Max (slept, baby-sat, laughed)*
b. *Max (slept, baby-sat, laughed) his way through school*

The latter are verbs like *blunder, swagger*:

c. *Max (swaggered, blundered) down the highway*
d. *Max (swaggered, blundered) his way down the highway*

Many of the transitive verbs appearing in the paradigm can take an indefinite noun like *things* or *people* as a direct object:

(24) a. *Max pistol-whipped his way through the crowd (cf. Max pistol-whipped people, *Max pistol-whipped)*;
b. *Max blue-pencilled his way through the script (cf. Max blue-pencilled things, *Max blue-pencilled)*.

Those transitive verbs which can neither omit their object nor take an indefinite object, such as *countenance, attain, undergo*, do not appear in the paradigm:[5]

(25) a. **Max countenanced his way through the interview*
b. **Max attained his way through the Alps*
c. **Max underwent his way through the operation*

Many of the verbs of the paradigm can be distributed approximately among roughly defined semantic subclasses as follows:

Verbs of sound production: *burble, buzz, chirp, drum, fife, harrumph, wheeze, etc.*;

Verbs of movement: *canter, gallop, backpedal, frolic, lurch, stagger, strut, etc.*;

Verbs of sound production plus movement: *clank, clip-clop, rattle, puff, huff, whiz, etc.*;

Verbs of beating or hitting: *whack, saber, pistol-whip, bop, knock, etc.*

However, many other verbs do not fall into these semantic classes, and their semantic characterization is unclear: *percolate, allegorize, ransack, etc.* Such vague intuitions cannot constitute operational criteria for separating these verbs into clearly defined sub-classes, and the description of the paradigm must be based on its syntax.

2.4. Multiple entries

Many verbs of the paradigm can take either various types of subjects or several of the variants of *way* (§2.2), in complementary distribution. I have given such verbs multiple entries in the table, one for each type of syntactic behavior. Several types of verbs with such multiple entries emerge:

i) The majority of such verbs have different reductions of *way* according as *N2* in *Prep N2* is *Nconc* or *Nabs*:

(26) a. *N2* =: *Nconc   Max battled (his way, it, E) across the fields*
b. *N2* =: *Nabs   Max battled (his way, it, *E) into the presidency*

Some verbs in this group have different distributional properties according to the type of noun in *N2*; in particular, the subject varies according as *N2* =: *Nconc* or *N2* =: *Nabs*:

(27) a. *N0* =: *Nconc, N2* =: *Nconc*:
Black and gold threads alternate (their way, themselves, E) across the blouse

b. *N0* =: *Nhum*, *N2* =: *Nabs*:

    John and Max alternated (their way, *themselves, E)
    through the poetry reading session

(28)   a.   *N0* =: *Nhum*, *N2* =: *Nabs*:

    Max drummed (his way, *a path, *E, himself) into the Hall
    of Fame

    b.   *N0* =: *Nabs*, *N2* =: *Nabs*:

    An insistent rhythm drums (its way, a path, E, *itself)
    through the scherzo

Other verbs of this group take the same types of subject for each value of *N2*, but have different possibilities for the reduction of *way*. Thus the verb *beep* takes *N0* =: *Nhum* or *Nconc*:

(29)   a.   *N2* =: *Nconc*:

    (Max, the police car) beeped (Poss-0 way, E) across the field

    b.   *N2* =: *Nabs*:

    (Max, the computer) beeped (Poss-0 way, Pron-self, *E)
    into her heart

The verb *idle* takes *N0* =: *Nhum*:

(30)   a.   *N2* =: *Nconc*:

    Max idled (his way, E, *himself) across the plaza

    b.   *N2* =: *Nabs*:

    Max idled (his way, *E, himself) through wealth and fame

ii) A small group of verbs take the same type of *N2*, but are separated into multiple entries according to the variants of *way* that are possible for each type of subject. Thus, *hump* takes *N2* =: *Nconc* and a human or concrete subject:

(31)   a.   *N0* =: *Nhum*

    Max humped (his way, it, E) across the floor

    b.   *N0* =: *Nconc*

    The road humps (its way, *it, E) through the valley

There are altogether about 250 verbs with multiple entries, *i.e.*, 10% of the verbs of the paradigm.

3.   Analysis by fusion

3.1. The paraphrase using the support verb *make*

If we seek a paraphrase of sentence (1), the one suggested by Jespersen is seen to be adequate:

(32)   *Max (laughed, ate, slept) his way through school*
    = *Max made his way through school by (laughing, eating, sleeping)*

where the symbol = means 'stands in a transformational relation to'.[6] M. Gross 1981:45-48 has termed this analysis **fusion**; he uses it to relate sentence pairs such as

(33)   a.   *Max (screamed, cawed, croaked, cackled, etc.) to Ida that S*
    b.   *Max said to Ida that S by (screaming, cawing, croaking, cackling, etc.).*

Gross then suggests that a transformation fuses the verb *say*, in sentence (b), to the intransitive verb in the *by*-complement so as to produce the sentence (a). This analysis is similar to the one suggested in (32) and I have adopted his term. In (32), the verb of the *by*-complement fuses with the support verb *make* to produce the sentence of the paradigm.

A piece of evidence in favor of this analysis by fusion is the fact that a second *by*-complement is no longer possible once fusion has taken place (M. Gross, 1981:47), *e.g.*,:

(34)   **Max slept his way through school by laughing*

Another piece of evidence in favor of the process of fusion is seen in the difference between the following sentences:

(35)   a.   *Max made his way through the labyrinth*
    b.   *Max lost his way through the labyrinth*

The first sentence is of normal acceptability, whereas the second, if considered as the 'opposite' or the contrary of the first, is bizarre and uninterpretable. The feeling of bizarreness arises from the contradiction in the putative source of (35b):

(35)   c.   *Max made his way through the labyrinth by losing himself*

This source is grammatical, but contains a contradiction: how does Max succeed in going through the labyrinth (*i.e.*, make his way) by *not* succeeding (*i.e.*, by losing himself)? Such a contradiction means that the process of

fusion cannot be applied to (35c); but if it is, then the resulting sentence (35b) is felt as bizarre.[7]

The two sentences of each transform above are not exactly the same, and differ by at least some nuance. However, the difference between each such pair of sentences is constant for the verbs in the paradigm. Thus, the difference between the following pair of sentences:

> (36) a. *Max pushed his way through the crowd*
>
> b. *Max made his way through the crowd by pushing* .

is the same as the difference between the pair:

> (37) a. *Max wheezed his way through the speech*
>
> b. *Max made his way through the speech by wheezing*

The invariance of the difference between pairs is an important argument in favor of this analysis of these sentences. There are two other reasons for this choice; the second one is the pertinence of the verbs *make* and *find* as the basis of the paraphrase.

Of the roughly 2,000 verbs in the paradigm, all of them have an adequate paraphrase as above (or by one of the modifications discussed below) with the exception of just the five verbs *find, make, take, pick* and *be on*.[8] These have no adequate paraphrase even by repeating the verb after *by*:

> (38) *Max (made, found, took, picked, was on) his way across the road = Max (made, found, etc.) his way across the road by (making, finding, etc.) his way across the road.*

Such a repetition of the predicate in the *by*-phrase yields a redundancy rather than a paraphrase.

The choice of *make* as the base verb of the analysis by fusion thus leaves the status of *find, take, pick* and *be on* unclear. It may be possible to approach this problem by taking into account the status of *make* as a support verb on *way* (cf. (7)). Such support verbs are known to have aspectual variants (cf. M. Gross, 1981:33; R. Vives, 1984:167), *e.g.*, the variants *nourish* and *cherish* for the support verb *have* on *hope*:

> (39) a. *Max hopes for a change*
>
> b. *= Max has hopes for a change*
>
> c. *= Max (nourishes, cherishes) hopes for a change*

In the same way, the verbs *find, take,* and *be on* may be aspectual variants

of *make* in the sentences of the paradigm under study. The difference between *The money made its way into his pocket* and *The money found its way into his pocket* would be the same as between (39)b and (39)c.

The third reason for using *make* as the base verb is its wide selection of subjects; it can appear in the paradigm with all three kinds of subject mentioned above:

> (40) a. $N0 =$: *Nhum*
>
> *Max made his way through the crowd*
>
> b. $N0 =$: *Nconc*
>
> *The car made its way across the fields*
>
> *The money made its way into his pockets*
>
> c. $N0 =$: *Nabs*
>
> *Technological improvements have made their way within this science*
>
> *Strange notions made their way into the final draft*

Since these are all the kinds of subjects that occur with the verbs of the paradigm, and *make* can appear with them, no paraphrase using *make* will lead to an unacceptable subject-verb sequence. The choice of the verb *make* for the paraphrase is therefore not an arbitrary one, given its unique status with respect to the paraphrase.

Note that many verbs can appear in the complement *by V-ing* which is added to *make Poss-0 way Prep N2* (as in (32) above); however the resulting sentences cannot all be reduced by the fusion of this verb with *make*:

> (41) a. *Max made his way through the crowd by (disembarking, descending)*
>
> b. **Max (disembarked, descended) his way through the crowd*

The situation for *make Poss-0 way* is that many verbs undergo Fusion with *make*, but many more do not.

Now there are many other idioms of the type *make Poss-0 way*, *e.g.*, *make one's exit, make one's mark* and *make one's play*. These also require a pronoun co-referent to the subject and do not admit of Extraction as in (5b) and (c). An unrestrained *by*-complement can be added to the sentences containing these idioms, but none of the resulting sentences can be reduced by the process of fusion:

> (42) a. *Max made his (exit, entrance) into the wings by laughing;*
>
> **Max laughed his (exit, entrance) into the wings*

b. *Max made his mark (on society, as a playwright) by lecturing*;
    *Max lectured his mark (on society, as a playwright)
c. *Max made his play for their votes by electioneering*; **Max
    electioneered his play for their votes*

We see, then, that the process of fusion observed with *make one's way* is
out of the ordinary and so constitutes a phenomenon of interest.

3.2. Kinds of paraphrase

(i) The base form of the paraphrase in (32) accounts for intransitive
verbs that can take only the empty object E, as for example *fidget*:

(43) *Max fidgeted his way through the fitting*
      = *Max made his way through the fitting by fidgeting*

I represent this paraphrase by the following formula:

(44) *N0 make Poss-0 WAY Prep N2 by V-ing*

From this, it would seem to be the case that Fusion can occur only if
the verb in the *by*-complement is intransitive (but *cf.* note 5). If this verb is
transitive and its complement is not empty, as in the sentence

(45) *Max made his way through the crowd by pushing the baby-car-
      riage*

then Fusion cannot operate, since the fusion of *push* with *made* would leave
behind the non-zeroable sequence *the baby-carriage*. We see this from the
fact that (45) is not a paraphrase of sentence (1a).

However, an empty object is not the only condition under which
Fusion is applicable; paraphrases similar to (44) are available which involve
several kinds of zeroing, as well as a paraphrase involving a metaphor in *as-
would*. The deletions in question are of the following types.

Various kinds of semantically empty objects can be zeroed, *i.e.*,
objects that either add no information to the sentence or else add a general
type of information that can be recovered after zeroing. Such objects are:
indefinite objects, such as *things* or *people*, appropriate or very restricted
objects whose prior presence can be deduced from the presence of the verb,
and support verbs which are needed to make verbs from nouns. In addition,
the objects of some of the verbs of the paradigm are repetitions either of
the *N2* in the prepositional phrase following *way*, or of the entire preposi-
tional phrase, and so can be zeroed. Another object contains a reflexive
pronoun referring to the subject, and can be zeroed. The details of these

deletions are presented below.

(ii) A group of transitive verbs of the paradigm can appear in the *by*-
complement with an indefinite object such as *things* or *people*:

(46) a. *Max bamboozled his way into the job*
          = *Max made his way into the job by bamboozling people*
      b. *Max cut his way through the forest*
          = *Max made his way through the forest by cutting things*

The indefinites *things* and *people* have a large selection (Harris, 1982, §1.5,
§2.11) and can appear as subject or object (as above) of very many verbs.
Other verbs, such as *belt*, *earn* and *factor(ize)*, take a particular, restricted
object, which can be limited to a few words or just one word:

(47) a. *This singer belted her way through the tracks on the album* =
          *This singer made her way through the tracks on the album by
          belting (out) (songs, tunes, melodies)*
      b. *Max earned his way through college* = *Max made his way
          through college by earning money*
      c. *Max factor(iz)ed his way to an elegant solution of the equation*
          = *Max made his way to an elegant solution of the equation by
          factor(iz)ing terms*

The restricted object of *belt (out)* is *song*, *tune* and a few synonyms, that of
earn is *money*; and *factor(ize)* takes a special mathematical object such as
terms, *elements* or the like. The restricted object can be unique (as for *earn*)
and in addition its value determined by the context in which the sentence
occurs, e.g.,

(47) d. [...] *if their daughter can swat her way to a lucrative pro rank-
          ing* (New York Times Book Review, April 13th 1986, p.27/2)

In a context of baseball playing, the *by*-complement of the paraphrase is *by
swatting baseballs*; in a context of tennis, it is *by swatting tennis balls*, in a
context of ping-pong, ping-pong balls, *etc.*

This highly restricted object becomes what Z.S. Harris 1982 (§3, 55
(3)) terms appropriate, *i.e.*, semantically redundant, and the possibility of
its deletion can be related to the low information it carries. This paraphrase
can be represented as follows:

(48) *N0 make Poss-0 WAY Prep N2 by V-ing Nappr*

where *Nappr* is the restricted 'appropriate' object.

(iii) Another group of verbs require in the *by*-complement either some 'appropriate' verb, in Harris' terminology (Harris 1982: §6.8), or a 'support' verb (Gross, 1981). The first set is represented by verbs like *elbow*, *shoulder*, *nose*, which require a verb like *use*:[9]

(49) *Max elbowed his way down the aisle*
      = *Max made his way down the aisle by using his elbows*

Verbs like *chain*, *dot-dash*, *deduce*, *hobo*, *pioneer*, require a verb like *make* or *be*:

(50) a. *The pattern chains its way across the sweater*
          = *The pattern makes its way across the sweater by making a chain*
      b. *The message dot-dashed its way through her mind*
          = *The message made its way through her mind by making dots and dashes*
      c. *Max deduced his way from those premisses to the right conclusion*
          = *Max made his way from those premisses to the right conclusion by making deductions*
      d. *Max hoboed his way across the USA*
          = *Max made his way across the USA by being a hobo*
      e. *Max pioneered his way through the Rockies*
          = *Max made his way through the Rockies by being a pioneer*

I note this paraphrase as follows:

(51) *N0 make Poss-0 WAY Prep N2 by (Vappr-ing N-v, Vsup-ing V-n, Vsup-ing N-v)*

where *Vappr* is the appropriate verb, and *Vsup* the support verb; *N-v* is the noun from which *V* is derived (*elbow*, *chain*), and *V-n* is the nominalization of *V*.

(iv) A fourth group of 200 verbs divides into two subgroups according to the internal structure of the noun phrase in *Prep N2*. In the first group (containing about 150 verbs), *N2* contains either *Nhum*, *Nconc* or *Nabs*, and the *by*-complement of the paraphrase is *by V-ing N2*:

(52) a. *Acid etched its way through the metal = Acid make its way through the metal by etching the metal*
      b. *New ideas have infiltrated their way into this society = New*

ideas have made their way into this society by infiltrating this society
      c. *Max asterisked his way through the manuscript = Max made his way through the manuscript by asterisking the manuscript*[10]

I note this paraphrase as follows:

(53) *N0 make Poss-0 WAY Prep N2 by V-ing N2*

In the second group of verbs, the noun phrase of *Prep N2* is of the form *Npsy of Nhum*, where *Npsy* is a noun referring to some internal mental state of *Nhum*. *Npsy* is difficult to characterize, either semantically or syntactically: *Npsy* =: *heart*, *affections*, *confidence*, etc. There are over 20 such verbs, appearing in the following type of sentence:

(54) *Max (beguiled, cajoled, etc.) his way into (the heart, the affections, good graces etc.) of the king*

This can be represented formulaically as:

(55) *N0 V Poss-0 WAY Prep Npsy of N2*

The appropriate paraphrase is the following:

(56) *Max made his way into Npsy of the king by (beguiling, cajoling) the king*

which I can represent by:

(57) *N0 make Poss-0 WAY Prep Npsy of N2 by V-ing N2*

When Fusion applies to the paraphrases (53) and (57), the object *N2* of *V-ing* can be zeroed as a repetition of the *N2* appearing the prepositional phrase following *way*.

(v) A fifth group contains *V Prep N2* in the *by*-complement of the paraphrase, in such sentences as:

(58) a. *Max went his way across the road = Max made his way across the road by going across the road*
      b. *Water sluiced its way down the channel = Water made its way down the channel by sluicing down the channel*
      c. *Soft music wafted its way across the garden = Soft music made its way across the garden by wafting across the garden*

I can write this paraphrase with the following formula:

(59) *N0 make Poss-0 WAY Prep N2 by V-ing Prep N2*

Note that these sentences cannot be adequately paraphrased using (44), since the prepositional phrase cannot be deleted:

(60) a. **Max made his way down the road by going*
     b. **Water made its way down the channel by sluicing*
     c. **Soft music made its way across the garden by wafting*

We obtain the sentences (58) of the paradigm from the paraphrase (59) by zeroing the second occurrence of *Prep N2* in (59) when Fusion operates.

(vi) A sixth group of more than 80 verbs can be paraphrased only by means of an *as..would* comparison. For example, consider the following paraphrase for a sentence containing the verb *cannonball*:

(61) a. *(Max, the car) cannonballed Poss-0 way down the road*
     b. = *(Max, the car) made Poss-0 way down the road by cannon-balling down the road*

The *by*-complement in (61b) is a transform, by subject reduction, of the following sentence:

(62) a. *N0 cannonballed down the road*

which is not a lexical entry, *i.e.*, a base sentence, but is derived from the noun *cannonball*. Hence, such a paraphrase is unacceptable. Sentence (62a) seems to be related to a sentence such as the following:[11]

(62) b. *N0 went down the road as a cannonball would go down the road*

This suggests the following paraphrase for (61a):

(63) *(Max, the car) made Poss-0 way down the road as a cannonball would make its way down the road*

From this, we can derive (61a) in the following way.

(63) = (64a) *(Max, the car) made Poss-0 way down the road as a cannonball would*

by repetitional zeroing of the sequence *make its way down the road*;

= (64b) *(Max, the car) made-as-a-cannonball-would Poss-0 way down the road*

by Fusion of *as a cannonball would* with *made*;

= (64c) *(Max, the car) cannonballed Poss-0 way down the road*

Finally, we can obtain (62a) by zeroing *Poss-0 way* in (64c). This analysis can be used to derive similar sentences with the following verbs: *barrel, caterpillar, chariot, mole, (sky)rocket, snail, snake, snowplow, steamroller.*

The comparison I have used in (63) is between *N0* (*Max, the car*) in the first half, and *cannonball* in the second half. Some verbs in this group require a more general comparison involving both *N0* and *N2*, as in the following sentence with *corkscrew*:

(65) a. *The tunnel corkscrews its way through the mountain* =
     b. *The tunnel makes it way through the mountain as a corkscrew makes its way through a cork*

Note that we cannot zero *make its way through a cork* here as the analogous sequence was zeroed in (63) without first using some sort of 'similarity' transformation to equate *mountain* with *cork*. On the one hand, it is not clear what the form or content of such a similarity transformation would be; on the other hand, it is not at all clear how (65a) could be obtained in any other way than from (65b).

(vii) A seventh group of verbs are best paraphrased in terms of *Pron-0 self* (as noted by Jespersen), or by *each other, with each other*. Thus, we have the following sentences in the paradigm:

(66) a. *Max ingratiated his way into her favor*
     b. *Max and John quarreled their way across the campus*
     c. *The swarm of fans crowded their way across the stadium*

which can be paraphrased as follows:

(67) a. *Max made his way into her favor by ingratiating himself*
     b. *Max and John made their way across the campus by quarreling with each other*[12]
     c. *The swarm of fans made their way across the stadium by crowding each other*

I note this paraphrase as follows:

(68) *N0 make Poss-0 WAY Prep N2 by V-ing Pron-0 self*

Finally, a last group of 10 verbs cannot be paraphrased, so far as I can ascertain, by any of the paraphrases so far discussed. These verbs are either slang, or involve some sort of comparison that is not so easily stated as the ones discussed above. They are the following:

(69) a. *Max (belted, highballed, hightailed, hotfooted, ripped, zap-ped, zipped) his way down the highway*

   b. *Max (knocked, moseyed) his way around town*

   c. *The steamer plugged its way up the Nile*

The reader will note that it is scarcely possible to discover this residue of 10 verbs without having first examined the lexicon of English verbs systematically, in order to observe all the verbs of the paradigm. Note also that if one happened upon one of the sentences of (69) in the course of some other investigation than the present one, it would not be possible to elucidate its status as a residue without carrying out the present systematic study.

3.3. Object Incorporation

It will be noted that all these paraphrases, except (44), contain additional elements after the verb in the sequence *by V-ing*. These elements, however, are all reconstructible from the context, *i.e.*, the original sentence, hence do not represent an arbitrary addition to the analysis. Now, the paraphrase in (44) contains only three morphemes more than the original sentence (2), viz., *make, by* and *-ing*. All of them arise from the lexical entry of the expression *make one's way*, which gives explicit expression to the notion of agentivity felt in (2).[15] The analysis by Fusion consists in uniting the support verb *make* with the verb *V* in the paraphrase, and then dropping the morphemes *by* and *-ing*:

(70) a.   *Max made his way through the meeting by sleeping*

   b. = *Max sleep-made his way through the meeting*

   c. = *Max slept his way through the meeting*

The same analysis can be obtained with the other forms of paraphrase discussed above, by first reducing to zero the repeated elements that have been reconstructed from context. We shall see that we can account for the extraordinary productivity of the paradigm by using these paraphrases together with the analysis by Fusion.

This analysis is consistent with the fact that the transitive verbs of (25) cannot appear in the paradigm. The putative source of such sentences is

(71) **Max made his way through the Alps (by attaining, by attaining things)*

But this source is an unacceptable sentence whether the object of *attain* is empty or indefinite. It is possible, however, to create a nonce verb by

inserting the object of *attain*, and using this nonce verb to make (71) an acceptable sentence. Suppose that the attaining of summits (of mountains) were to become a recognized activity, using small helicopters or shoulder mounted jet packs, an activity independent of present-day alpinistic practise. Then a verb like *summit-attain* would become available, and we might say:

(72)   *Max summit-attained his way through the Alps*

This is precisely how the verb *map-read* has entered into the paradigm:

(73)   *The pilot map-read his way across the country (cf.* OED, Supplement, s.v. *map)*

Without the addition of *map*, the sentence would mean that the pilot made his way across the country by reading things, without necessarily piloting an aircraft. But the addition of *map* yields a technical verb referring to a specific activity carried out by pilots in the course of piloting an aircraft, namely, reading maps. The same process yields the following verbs of the paradigm: *lip-read, apple-polish, table-hop, bird-watch*, etc. as in the following sentences:

(74) a.   *Max lip-read his way through their whispered conversation*

   b.   *Max apple-polished his way (through high school, into the good graces of his teachers)*

   c.   *Max table-hopped his way across the crowded night club*

   d.   *Max bird-watched his way into the exclusive Audubon Society*

Note that these sentences either become unacceptable or change their meaning entirely if the object of the compound verb is omitted. We shall see that this procedure can be extended in a productive way so as to enable a constant creation of new verbs of the paradigm.

4.   Productivity; Idioms

The most remarkable feature of the paradigm is the existence of processes of productivity by means of which new verbs may enter into the paradigm. There are two main processes of this sort by which the list of verbs of the paradigm can be extended indefinitely:

   1) The domain of the support verb like *make, do* or *use* appearing in the paraphrase can be extended by using technical verbs and terms from various fields;

2) Certain idioms can be used in such a way as to yield a novel sentence of the paradigm.

Each of these methods leads to a list of verbs whose number can be increased apparently without limit.

The following verbs of the paradigm appear in sentences that can be paraphrased with the support verb *do*:

> *dance, pole-vault, somersault, cartwheel, etc.*

The domain of the support verb *do* can be extended by including any noun used for a particular dance step or an athletic event or feat — the well-known procedure for turning English nouns into verbs. Each such noun can yield a sentence of the paradigm:

i) dance:

(75) *Max (fandangoed, frugged, polkaed, smurfed, etc.) his way down the aisle = Max made his way down the aisle by doing a (fandango, frug, etc.).*

ii) ice-skating:

(76) *Max (double Lutzed, triple Salioed, etc.) his way across the arena = Max made his way across the arena by doing (double Lutzes, triple Saltos, etc.).*

iii) gymnastics:

(77) *Max (broad-jumped, shot put, high-jumped, etc.) his way into first place = Max made his way into first place by doing (broad-jumps, etc.).*

It is this analysis via the support verb *do* which explains how the following sentences arise:

(78) a. *Retton ... became the first person ever to layout-Tsukahara her way into America's heart* (Newsweek, Int'l. Ed., August 13 1984, p.28/2)

b. *They [= the children] believe they will karate chop their way to safety* (New York Times Book Review, Nov. 10th 1985, p.50/1)

The term *layout-Tsukahara* is a technical term in gymnastics and is in the domain of *do*: *The gymnast did a perfect layout-Tsukahara*. The nominalization relation *do N = V* yields the verb *to layout-Tsukahara*. This verb is rare not because it is a nonce verb, but rather because it is limited to a particular domain of activity. The same analysis applies to the second sentence, where we see that *do karate chops = to karate chop*.

Since new dance steps and new athletic figures are constantly being invented and named, the verbs of the paradigm constitute an open class whose membership can increase without limit.

The domain of the paradigm can be extended by considering the nouns appearing with *do*, other than those discussed above. The number of nouns appearing with *do* is undoubtedly considerable, but no systematic list of these nouns has so far been drawn up.[14] The following sentences give an idea of the kinds of nouns appearing with *do*:

(79) a. *I spent a couple of years odd-jobbing my way around the Far East* ("Maxwell's Demon", M. Sherwood, New English Library, London, 1976, p.22)

b. *Max double-taked his way through her extraordinary confession*

Note that when the noun *double-take* is used as a verb, the past tense morpheme is attached to the compound and not to the verb *take*.

The support verb *use* is needed to paraphrase sentences of the paradigm containing verbs like *belly, elbow, shoulder, nose, etc. (Cf. eqs.* (49) and (51) above). We can extend the paradigm by including nonce verbs derived from other nouns appearing with *use*:

(80) *Max tried to (hokum, common sense, brass knuckle) his way out of a fix = ... by using (hokum, common sense, brass knuckles)*

A small group of sentences of the paradigm can best be paraphrased by using idiomatic constructions:

(81) a. *Max inched his way along the ledge = Max made his way along the ledge (by going by inches, by going inchmeal)*

b. *Max bootstrapped (his way out of poverty, himself beyond his modest roots) = Max made his way (out of poverty, beyond his modest roots) by bootstrapping himself = Max ... by pulling himself up by his bootstraps*

c. *Max glad-handed his way through the crowd = Max made his way through the crowd by giving people the glad-hand*

d. *Max lone-wolfed (his way, it) through college = Max made his way through college by being a lone-wolf*

This paraphrase in terms of an idiom is the only way to understand how

such sentences are constructed, for *inch, bootstrap, glad-hand* and *lone-wolf* originate in compound verbs of idiomatic sentences, and have not ended in verbal position by the zeroing of *do, make* or some other support verb.[15] In (81a), *inch* has become a verb by zeroing in *to go by inches*, which in turn is related to the idiomatic adverb *by inches = very slowly*. And (81b) can be understood only by zeroing in the idiom appearing in its paraphrase. This use of idioms is very productive, and we find such sentences as the following:

(82) a. *We labor over the past, Monday morning quarterbacking our way through the week* (NY Times Book Review, Dec. 23, 1984, p.2/2)

   b. *He inched his way up the corridor as if he would rather be yarding his way down it* ("Life, the Universe and Everything", D. Adams, p.78)

   c. *From low enough gee zones you can even hand-over-hand your way up [the wall]* (S. & J. Robinson, "Stardance", Dial Press, New York, 1978, p.128)

In the first sentence, *quarterback* has become a verb from the following pair of sentences, which are related by nominalization: *Max is a Monday morning quarterback = Max does Monday morning quarterbacking*. The second sentence puts *yard* in a parallel position to *inch*. However, *yard* does not appear in any idiomatic expression, as does *inch*. The only way to understand it then is to assume that the author has verbalized *yard* by creating the expression *to go by yards*, in parallel with the idiom *to go by inches*. And in fact, a sentence like *Max yarded his way down the hall* would not have as evident an interpretation as does the similar sequence in (82b). In the third sentence, the idiomatic adverb *hand-over-hand* has become a verb by the deletion of some support verb such as *climb* or *go* which is associated with this adverb: ... *by (going, climbing) hand-over-hand up the wall*.

The following sentences show us how the extension of the domain of the paradigm via idioms can be carried out:

(83) a. *Were they going to be able to bareface their way out of this predicament?* ("Hitchhiker's Guide to the Galaxy", D. Adams, p.66)

   b. *He light-fingered his way through the pile of banknotes*

The first sentence can be understood by reference to the idiom *to tell a bare-faced lie*; we see that the adjective *barefaced* has become a nonce verb

bareface (by back formation). In the same way, the idiom *to have light fingers* yields the nonce verb *light-finger* in the second sentence. In the following sentence:

(84) *The Americans .. faced a choice: to low-key it .. or go for broke* (Newsweek, Int'l.Ed. Aug.13th, 1984, p.27/1)

the idiomatic adverbial *low-key*, from the expression *to play smthg. low-key*, has become a nonce verb. Note also that *it* is a pronominalization of *way*: *to low-key their way through the affair = to low-key it through the affair*.

It is now clear that many such idiomatic adverbs and sentences can yield nonce verbs of the paradigm which appear in sentences whose paraphrase by means of the support verb *make* contains the idiom in the *by*-phrase. A brief survey of a collection of idioms (Berry & Van den Bank, 1942) yields the following constructions:

(85) a. *Max tried to (hot-air, song and dance, tall story, whopper, phoney, etc.) his way out of a jam = ...by talking hot air, by telling a (song and dance story, tall story, whopper, phoney, etc.)*

   b. *Max tried to (humble pie, low-profile, straight-face, stiff-upper-lip, etc.) his way into her good graces = ... by eating humble pie, by keeping a (low profile, straight-face, stiff upper lip, etc.)*

   c. *Max tried to (cat and mouse, second fiddle, possum, tug-o'-war...) his way through the interrogation = ... by playing (cat and mouse, second fiddle, possum, tug-o'-war, etc.)*

Many idioms of the form *be + N* (*cf. lone-wolf* in (81d) yield verbs of the paradigm by deleting the support verb *be*, in the same way that the deletion of *Vsup =: do* above gave rise to verbs in the paradigm:

(86) a. *Ida tried to (cheapskate, big mouth, nice nellie) her way through college*

   b. *= Ida tried to make her way through college by being a (cheapskate, big mouth, nice nellie)*

Similarly for *eager beaver, cry-baby, home-body, loud-mouth, hoity-toity, kamikazi,* and for many other idioms of this type.

Another source of productivity is obtained by an extension to new verbs of the analysis using the comparative. We find such sentences as the

following:

(87) a. *The airplane pinballed its way across the Mediterranean*

 b. = *The airplane made its way across the Mediterranean as a pinball would make its way across a board*

(88) a. *The book skyrocketed its way onto the best-seller list*

 b. = *The book made its way onto the best-seller list as a skyrocket would make its way into the air*

(89) a. *The fictional contrivances butterfly their way onto the screen*[16]

 b. = *The fictional contrivances make their way onto the screen as a butterfly would make its way onto a flower*

A further source of productivity is the following. We have seen in §3.3 how the incorporation of the object into a verb can create a complex verbal expression that enters into the paradigm. This procedure applies both to verbs that are in the paradigm, e.g., *read*, from which we obtain *map-read* and *lip-read* (sentences (72) and (73a)), and to verbs that are not, like *attain*, from which we can create *summit-attain* (sentence (71)). This procedure can be extended productively to create an unlimited number of compound verbs:

(90) a. *Max belt-tightened his way through the Depression*

 b. *The president (rumor-scotched, question-begged) his way through the press conference*

 c. *Economists are trying to budget-balance their way through the crisis*

 d. *Max lip-synched his way through "The Godfather"*[17]

 e. *The politician baby-hugged his way through the crowd*

The appearance of processes of productivity in a paradigm makes a systematic classification of the verbs of the paradigm difficult or impossible. The verbs cannot be listed *in extenso*, and if there is no intensional definition available for these verbs then the class cannot be adequately described (*cf.* A. Guillet 1986, pp.98-99).

5. Conclusions

Aside from the entirely novel picture that has emerged of the generality and lexical extension of the paradigm, the systematic study has led to

three results. The first one concerns the verification of a semantic judgment by the systematic study of the paradigm, the second one the pronominalization of *way* to *it*, and the third the use of the *as ... would* comparison in the derivation of sentences of the paradigm.

5.1. A fortunate circumstance has it that the construction under consideration is apparently isolated from the main body of English grammar, that is, it has not been necessary to relate it to other similar constructions of English in order to examine and analyse it.[18] This enables me to draw the following conclusion from this systematic investigation. Jespersen's semantic intuition, as expressed in sentence (32), is that the sentences of the paradigm can be paraphrased by similar sentences containing *make one's way*. This intuition strikes one as quite correct, but it has not yet been verified. Now the systematic investigation I have undertaken shows that *all* of the 2,000-odd verbs of the paradigm can be paraphrased by a sentence containing *make one's way* (§3.2), with the exception of *find, take, pick* and *be on*. These verbs seem to be aspectual variants of *make*, and can be set apart from the rest of the verbs of the paradigm, together with *make*.[19] Then it is the case that this systematic study has confirmed Jespersen's semantic intuition: the paraphrase, which is felt to be correct, can be shown by a syntactic study to be valid for the entire paradigm.

5.2. The pronominalization of *way* to *it* is an instance of what Z.S. Harris 1982: §8.2A terms pronominalization of a unique word. The close synonymy of the following types of sentences of the paradigm (cf. §2.2):

(91) a. *Max had to improvise his way through the last movement*

 b. = *Max had to improvise it through the last movement*

 c. = *Max had to improvise it*[20]

assure us that *it* is the pronominalization of *Poss-0 way* and not an impersonal pronoun of apparently inexplicable origin. The same is true for all sentences of the paradigm containing a verb denoting a particular manner of locomotion:

(92) a. *Max had to (canoe, pedal, jog, hotfoot) (his way, it) across town*

 b. = *Max had to (canoe, pedal, jog, hotfoot) it*

This analysis in terms of pronominalization explains the status of *it* in such a sentence as the following:

(93) *If Emerson was to be, he would have to "essay it"* (W. Gass, 'Habitations of the Word', Simon & Schuster, N.Y., 1985, p.31)

The meaning in context is that Emerson would have to write essays in order to survive as a writer, so that the second half of (93) must be a transform of the following sentence:

(94) *He would have to essay it through (affairs, matters)*

which contains an indefinite noun phrase that is then deleted. This sentence in turn is derived from:

(95) a. *He would have to essay his way through affairs* =
     b. *He would have to make his way through affairs by writing essays*

where *write* is the appropriate (semantically redundant) verb for *essays*.

Other occurrences of *it*, which seem inexplicable and have been termed 'idiosyncratic', can also be seen as pronominalizations of *Poss-0 way*:

(96) a. *He cross-ruffed it to a grand slam*
     b. *He (beelined, hared, hied, hoofed) it home*
     c. *They (roughhoused, thumbed) it across Texas*

There are also several verbs that are not in the paradigm, but which appear with *it* in a context strongly suggestive of the sentences of the paradigm:

(97) a. *Cheese it, the cops!*
     b. *The gangsters cheesed it across town*
     c. **The gangsters cheesed their way across town*

The verb *cheese*, which has this meaning of flight only in these contexts,[21] cannot appear with *Poss-0 way*. This is the case termed 'missing source' by Z.S. Harris 1964:§4.3: the transformational resultant exists — sentences (97) with *it* — but the source sentence on which the transformation *Poss-0 way = it* operates, (97c), is unacceptable.

The verb *lam* appears in similar contexts with the meaning of flight, and in addition takes the support verb *take*:

(98) a. *They (lammed it, took it on the lam) across town*
     b. **They (lammed their way, took their way on the lam) across town*

Similarly, *dog* and *leg*, which are not in the paradigm, appear with *it* in a context of movement:

(99) *Max (dogged, legged) (it, *his way) across town*

Finally, there is a group of verbs which are not in the paradigm that appear with following *it out* or *it up* in expressions that seem to be close to idioms:

(100) a. *Max decided to (brazen, brave, stick, tough, wait) it out*
      b. *Max decided to live it up*

Such sentences are also observed with verbs of the paradigm:

(101) a. *Max (battled, fought, whooped, sweated, etc.) (his way, it)*
          (across the field, through the crisis)
      b. *Max (battled, fought, sweated, etc.) it out*
      c. *Max whooped it up*

Harris' analysis in terms of a missing source can also be used here to explain the apparently idiomatic occurrence of *it* in sentences (100). The pronominalization of *Poss-0 way* to *it* in (101a) yields the (b) and (c) forms; in (100), the source with *Poss-0 way* is missing, and only the resultant forms in *it* are attested.[22]

5.3. The *as ... would* comparison that was used to derive (61a) from (63):

(61) a. *(Max, the car) cannonballed Poss-0 way down the road*
(63)   *(Max, the car) made Poss-0 way down the road as a cannonball would make its way down the road*

can also be used to derive sentences like (62a):

(62) a. *N0 cannonballed down the road*

We might try to derive this sentence from (62b):

(62) b. *N0 went down the road as a cannonball would go down the road*

but this leads to an unattested operation of Fusion, as follows:

· (62) b. = (102) a. *N0 went down the road as a cannonball would* by repetitional zeroing of the sequence *go down the road*;
         = (102) b. *N0 went-as-a-cannonball-would down the road*
         = (62) a. by Fusion of *as a cannonball would* with *go*.

But this operation of Fusion with *go* has no syntactic basis; its only justification would be that it captures the meaning associated with the verb *cannonball*.

By contrast, the analysis proposed in (63) and (64) above, followed by the deletion of *Poss-0 way*, is syntactically justified at each step, including the Fusion with *make*. In this way, a satisfactory derivation of sentences containing verbs like *cannonball, skyrocket, steeple, etc.* is obtained. These verbs cannot be obtained from the relation *do N = V* (as in (78)).

Author's address:

L.A.D.L.
Université Paris 7
2 Place Jussieu
F-75005 PARIS

APPENDIX

Shown here is a specimen page from the list of verbs of the paradigm. Each verb use constitutes a line entry, hence verbs having multiple uses occupy several line entries. To the left of each verb are columns for the subclasses of acceptable subjects; to the right of the verb are two groups of columns for indicating the properties of the sentences of the paradigm. The first group of columns indicate the appropriate paraphrase of the sentence, the second group indicate the type of noun appearing in the prepositional phrase *Prep N2*, and the acceptable reductions of *way*. The sign "+" in a column for a noun subclass means that the subclass is acceptable in that position; in a column for a property it means that the sentence has that property. The sign "−" indicates that the subclass is unacceptable or that the property is inapplicable to the sentence.

The following noun subclasses were used to describe *N0* (subject) and *N2* (in the prepositional phrase). These are intended as approximate semantic subclasses to guide the reader in reconstructing the sentences of the paradigm, and not as precisely defined syntactic subclasses of nouns.

Nhum (Col. 1): a 'human' noun, such as *Max, the jury, the council*. The indication *pl* in Col. 2 means that a plural or collective human noun is required.

Nconc (Col. 3): a 'concrete' noun, such as *car, road, river, acid*.

SUBJECT					VERB	PARAPHRASE					PROPERTIES					
hum	pl	conc	abs	anim		0	V-n.N-v	N0-slf	Ninde ef	(PrepN)2	conc	way=it	abs	apath	way=0	way=self
+	−	−	−	.	CONQUER	+	−	−	+	−	+	−	−	−	−	−
+	+	−	−	−	CONSPIRE	+	−	+	−	−	−	−	+	−	−	−
+	−	−	−	−	CONTEMPLATE	+	−	+	−	−	−	−	+	−	−	+
−	−	+	−	−	CONTINUE	−	−	−	−	;	+	−	−	−	+	+
+	−	−	−	−	CONTINUE	−	−	−	−	;	−	−	+	−	−	−
+	−	−	−	−	CONTRACT	−	+	−	−	−	−	−	+	−	−	−
+	−	−	−	−	CONTRADICT	−	−	+	+	−	−	−	+	−	−	+
+	−	−	−	−	CONTRIBUTE	−	−	−	+	−	−	−	+	−	−	−
+	−	−	−	−	CONVALESCE	+	−	−	−	−	−	−	+	−	−	+
+	−	−	−	−	CONVENTIONALIZE	−	−	−	+	−	−	−	+	−	−	+
+	+	−	−	−	CONVERSE	+	−	+	−	−	+	−	+	−	−	−
+	−	−	−	+	COO	+	−	−	−	−	+	−	+	−	−	−
+	−	−	−	−	COOK	+	−	−	−	−	−	−	+	−	−	−
+	+	−	−	−	COOPERATE	+	−	+	−	−	−	−	+	−	−	−
+	−	−	−	−	COPY	+	−	−	−	−	−	−	+	−	−	−
+	−	−	−	−	COPYCAT	+	+	−	−	−	−	−	+	−	−	−
+	−	−	−	−	COQUET	+	+	−	−	−	−	−	+	−	−	−
+	−	−	−	−	CORE	−	−	−	−	+	+	−	−	+	−	−
−	−	+	−	−	CORKSCREW	−	+	−	−	■	+	−	−	−	+	−
+	−	−	−	−	CORRECT	−	−	−	−	+	−	−	+	−	−	−
+	+	−	−	−	CORRESPOND	+	−	+	−	−	−	−	+	−	−	−
−	−	+	−	−	CORRODE	−	−	−	−	+	+	−	−	+	−	−
+	−	−	−	−	COUGH	+	−	−	−	−	−	−	+	−	−	+
+	−	+	−	−	COUGH	+	−	−	−	−	+	−	−	−	−	−
+	−	−	−	−	COUNT	+	−	−	+	−	−	−	+	−	−	−
+	−	−	−	−	COUNTERATTACK	+	−	−	−	−	+	−	−	−	−	−
+	−	−	−	−	COUNTERFEIT	+	−	−	−	−	−	−	+	−	−	−
+	−	−	−	−	COUNTERMARCH	+	−	−	−	−	+	+	−	−	+	−
+	−	−	−	−	COUNTERPLOT	+	−	−	−	−	−	−	+	−	−	−
+	−	+	−	+	COURSE	−	−	−	−	;	+	+	−	−	+	−
+	−	−	−	−	COURT	+	−	−	−	−	−	−	+	−	−	−
+	−	−	−	−	COWHIDE	−	−	−	+	−	+	−	−	+	−	−
+	−	−	−	−	COZEN	−	−	−	+	;	−	−	+	−	−	−
+	−	−	−	+	CRAB	−	−	−	−	■	+	+	−	−	+	−
+	−	−	−	−	CRAB	+	−	−	−	−	−	−	+	−	−	−
+	−	−	−	−	CRAM	+	−	−	−	−	−	−	+	−	−	−
−	−	−	+	−	CRANK	−	−	−	−	■	−	−	+	−	+	−
+	−	−	−	−	CRAP	+	−	−	−	−	+	−	−	−	−	−
+	−	+	−	−	CRASH	−	−	−	−	;	+	−	−	−	−	−
−	−	+	−	−	CRASH-DIVE	+	−	−	−	−	+	+	−	−	+	−

Nabs (Col. 4): an 'abstract' noun, such as *obsession, novel, economy*.

Nanim (Col. 5): an 'animate' noun, referring to animals and insects. Some verbs require such a noun as subject, *e.g.*, *coo, churr, buzz.* Human nouns can be the subject of such verbs in a metaphor.

The first group of columns to the right of the verb contain the paraphrase properties of the sentences (§3.2). The sign "+" in one of these columns indicates the appropriateness of that paraphrase for the sentence. The headings of the column refer to the paraphrase formulas in the text as follows:

0: intransitive verbs; *eq.* (44).

V-n, N-v: support verbs (*do, use*); *eq.* (51)

N0-slf: *each other, N0-self*; *eq.* (68)

Nindef: appropriate object; *eq.* (48).

(Prep) N2. I have used four values (in addition to the minus sign) in this column to represent four related paraphrases, as follows. The sign "+" indicates the paraphrase *by V-ing N2*, *eq.* (53); the sign ":" indicates the paraphrase containing *Npsy*, *eq.* (55); the sign ";" indicates the paraphrase using *Prep N2*, *eq.* (59); and the sign "=" indicates the *as-would* paraphrase, in *eq.* (61) and thereafter.

The second group of columns contain the properties of the prepositional group and of the sentence, as follows. The first and third columns, marked *conc* and *abs*, contain a "+" sign if the noun *N2* in the prepositional group can be a concrete or an abstract noun, respectively. The second, fifth and sixth columns indicate the possibility of reducing *way* to *it, 0* or *N0-self* respectively. The fourth column, headed *a path*, contains a "+" sign if *way* can be replaced by *a path, a swath*, etc.

NOTES

1) The question of just how many verbs there are in a natural language is of course not a simple one, and the answer one gives depends on how one counts the verbs. Not only do current verbs leave the language (become archaic), but new ones constantly enter; furthermore, there is a question of productivity with prefixes such as *re-, de-*, and suffixes like *-ize*. As an approximation for the number of English verbs, I have collected all the verb forms in Webster's New Collegiate Dictionary, 7th edition, plus a handful of verbs not appearing there which I encountered in various texts and dictionaries. These amount to about 10,000 verb forms.

2) The sum of the percentages exceeds 100 because some verbs can accept more than one noun subclass in the subject position.

3) A specimen of this table is included in the appendix; the entire table contains the properties of the 2,000-odd verbs of the paradigm, and cannot be reproduced here. It is available to interested researchers from the author, at the following address: University Paris 7 - L.A.D.L., 2 Place Jussieu, Paris 5, France.

4) *cf.* Z.S. Harris, 1982, §8.2(A).

5) The converse, however, is not true. There are many intransitive verbs which can either omit their object or take an indefinite object, but do not appear in the paradigm:

> (*The light, The lamp*) *gleamed*; *(*The light, The lamp*) *gleamed its way across the valley*

Even with a semantically more appropriate noun such as *night*, we cannot obtain an acceptable sentence of the paradigm:

> *The light gleamed through the dark night*; **The light gleamed its way through the dark night.*

Similarly for verbs like *glow, glitter, glisten, relent, leave*, etc.

6) Jespersen (cited in §1.2 above) mentions the possible paraphrase with *while*: *Max made his way through school while laughing.* However, this paraphrase seems to be semantically less adequate for many of the verbs of the paradigm, e.g.,

> *An obsesssion with death weaves its way through the text*
> ? = *An obsession with death makes its way through the text while weaving through the text.*

Furthermore, the paraphrase in *while* does not capture the notion of agentivity that is strongly associated with the sentences of the paradigm.

7) Note, however, that there are very many sentences which contain no contradictions, yet cannot undergo Fusion, *e.g.*, *Max made his way onto the stage by entering;* **Max entered his way onto the stage.* Such sentences have also to be accounted for semantically if the explanation by contradiction is to carry weight.

8) There are nevertheless 10 verbs derived from slang, or various comparisons and idioms for which I have not found an adequate paraphrase. *Cf.* §3.2, *in fine*.

9) *Cf.* Lakoff, 1970, where he finds a transformational relation to hold between *Max cut the salami with a knife* and *Max used a knife to cut the salami*.

10) The classes of paraphrase established here are not disjoint, and some sentences of the paradigm can appear in more than one paraphrase class. Thus, *asterisk* can also be paraphrased using a *Vappr*:

> (52) d.   *Max asterisked his way through the text* = *Max made his way through the text by using asterisks*

11) Cf. Z.S. Harris (1982), §9.7

12) A second paraphrase is possible here (*cf.* note 10 on *asterisk*):

(67) d. *Max and John made their way across the campus by quarreling*.
Similarly for *exercise*:

(67) e. *Ida exercised her way to a slim figure* = *Ida made her way to a slim figure by exercising* (E, *herself*)

These two paraphrases can be reduced to one if a transformational relation holds between *Ida exercised* and *Ida exercised herself*.

13) It is precisely because the sentiment of agentivity of (2) can be uniformly obtained from native linguists and speakers that (44) is felt to be a paraphrase of (2). That is, the notion of agentivity in sentence (2) is operational, and is not merely a private judgment of someone's semantic intuition.

14) Such a list is available for the French verb *faire*, which is a rough equivalent of *do* and *make*. Cf. J. Giry-Schneider 1978.

15) Except for *glad-hand*, where the verb *give* is the verbal part of the idiom *give someone the glad-hand*. Applying the support verb *use* to *bootstraps* yields the possible sequence *by using his bootstraps*, but its meaning is not as transparent as is that of the sequence *by using his elbows*. That is, there is no conventional interpretation available for the sequence *to use one's bootstraps* when it appears in the doubtful sentence *Max bootstrapped his way through the crowd*. If we replace *bootstrapped* here by *elbowed*, we obtain the sentence *Max elbowed his way through the crowd*, whose paraphrase contains the sequence *by using his elbows*. This latter has a conventional interpretation which explains why the original sentence is acceptable.

16) Cf. The Barnhart Dictionary of New English since 1963, Harper & Row, New York, 1973, s.v. *butterfly*.

17) The second Barnhart Dictionary of New English, Harper & Row, New York 1980, s.v. *lip-synch*.

18) E.g., the formula for the paradigm in sentence (2) might have been so closely related to forms such as *N0 V N1*, *N0 V Prep N2*, etc., that it would not have been possible to study the sentences of the paradigm without referring to prior systematic studies of such forms (which are not available). This turned out not to be the case, however, so that it was possible to investigate the paradigm quite independently of such constructions.

19) The reader will note that only a systematic investigation like the present one gives any assurance of having discovered all the aspectual variants of *make*, inasmuch as the paradigm contains more than 2000 verbs.

20) I intend here the reading where *it* does not refer to some preceding noun, e.g., *accompaniment* or *role*, that could be the object of *improvise*.

21) The verb *peel* was used in a similar fashion in the 19th century: *Come boys, peel it now, or you'll be late* (OED, s.v. *peel*, §5c). Note that *peel* cannot be used with *Poss-0 way*.
We also have *Beat it!*, where *beat*, unlike *cheese*, is in the paradigm: *Max beat* (*his way, it*) *across town*.

22) The lack of a source sentence for the sentences (100) makes them close to idioms. Note, however, that sentences such as *Max hammed it up*, *Max whooped it up*, which are in the paradigm, are not idioms. Cf. Machonis 1985, p.302.

REFERENCES

L.V. Berry & M. van den Bank. 1942. *A Thesaurus of American Slang*, New York: Crowell.

Cattell, Ray. 1984. Composite Predicates in English, in *Syntax and Semantics* Vol. 17, New York: Academic Press.

Giry-Schneider, Jacqueline. 1978. *Les nominalisations en français*, Genève-Paris: Droz.

Gross, Maurice. 1981. Formes syntaxiques et prédicats sémantiques, in *Langages* 63, Paris: Larouse, pp. 7-52.

Guillet, Alain. 1986. Représentation des distributions dans un lexique-grammaire, in *Langue Française* 69, Paris: Larousse. pp. 85-106.

Harris, Zellig S. 1964. The elementary transformations, in *Papers in Structural and Transformational Linguistics*, 1970, Dordrecht: Reidel.

Harris, Zellig S. 1982. *A grammar of English on mathematical principles*, New York: J. Wiley.

Jespersen, Otto. 1924. *A Modern English Grammar*, London: Allen & Unwin.

Kirchner, Gustav. 1951. A special case of the Object of Result, *English Studies* 32.

Lakoff, George. 1970. pronominalization, Negation and the analysis of adverbs, in R. Jacobs and P. Rosenbaum, eds. *Readings in English Transformational Grammar*, Waltham, Mass.: Ginn-Blaisdell.

Machonis, Peter. 1985. Transformations of verb phrase idioms, *American Speech* 60-4.

Poutsma, H. 1928. *A Grammar of Late Modern English*, Groningen.

Salkoff, Morris. 1983. Bees are swarming in the garden, *Language* 59-2.

Vivès, Robert. 1984. L'aspect dans les constructions nominales prédicatives, *Linguisticæ Investigationes* VIII:1.

Wendt, G. 1911. *Syntax des heutigen Englisch*, Heidelberg.

SUMMARY

Sentences of the type *Max elbowed his way through the crowd* have not been studied in detail hitherto. The systematic investigation undertaken here shows that the verbs appearing in them have a large lexical extension. These sentences are also productive, so that an unlimited number of new verbs of the paradigm are constantly being created; the verbs constitute an open class. Three new results have been obtained. The first shows how certain apparently inexplicable uses of *it* (as in *beat it!*) can be related to a pronominalization observed in the paradigm. The second shows how nouns like *cannonball, steamroller, skyrocket, etc.*, can become verbs. The third result is a verification, by a systematic investigation of the English lexicon, of the common semantic intuition that these sentences can be paraphrased by others like *Max made his way through the crowd by using his elbows*.

L'INTERPRÉTATION ÉVÉNEMENTIELLE
DES PHRASES EN *IL Y A*

JACQUELINE GIRY-SCHNEIDER
*Université de Paris VIII et L.A.D.L.**

Parmi les interprétations des phrases en *Il y a*, il en est une que l'on peut appeler événementielle. Il s'agit très précisément des formes en *Il y a* qui peuvent constituer des réponses aux questions *Qu'est-ce qu'il y a? Qu'est-ce qui se passe? Qu'est-ce qui arrive?*

- *Qu'est-ce qu'il y a?*

- *Il y a que la baignoire déborde*

- *Il y a la baignoire qui déborde*

- *Il y a un lion sur ce lit*

- *Il y a un révolver sur la table*

- *Il y a une manifestation dans l'avenue*

- *Il y a un empêchement à ce voyage*

Comme le montrent ces exemples, cette interprétation concerne des expressions en *Il y a* de formes diverses, constructions à compléments nominaux, constructions avec *que*, constructions à relative ... On cherchera donc si ces formes ont une structure de base commune qui rendrait compte de cette interprétation événementielle, notamment celles qui semblent avoir un sens purement locatif comme *Il y a un lion sur ce lit* ou *Il y a un révolver sur la table*, sans recourir à des notions extra-linguistiques ou sémantiques, sur la notion d'événement par exemple.

1.   Mise en évidence de la structure en *Il y a* à sens événementiel *Il y a que P*, où *P* =: *N V W*

Les constructions en jeu sont les suivantes:

(1)   *Qu'est-ce qu'il y a? - Il y a que P*
    =: *Qu'est-ce qu'il y a? - Il y a que Max est furieux*