10.2 The D Satellite

As first brought up in the Introduction, a constituent from elsewhere in a structure can move into adjunction as a 'satellite' of - or, can assatellate to - the verb, the whole constituting the 'verb complex'. This last was exemplified for English by the expressions in (10), now shown with the symbol ' \(\infty ' \) to mark the satellite:

(10)

Counting the satellite which joins with the verb to key in an insertion, English can have up to five ordered satellites in a verb complex, as in the sentence in (11) [which a parent might say to a child in a treehouse]:

(11)

(a)
$$[(')]_{GO \leftarrow HITHER} \leftarrow [right \leftarrow back \leftarrow down \leftarrow out] [from up in there]$$

(b) cóme right báck dówn out from up in there

Within a verb complex, as indicated in the first portion of (11a), all the constituents - except optionally (and sometimes obligatorily) the first - receive primary stress. Furthermore, within a sentence, such as that in (11a), which contains both a verb complex and a (DG)

prepositional phrase with a pronominal head, the verb complex as a whole receives primary stress and the prepositional phrase as a whole receives secondary stress. By the cyclic operation of stressing rules, the result at the surface, as indicated in (11b), is a sentence with a crescendingly heavy-stressed verb complex and a low-stressed prepositional phrase.

Now, one of the most characteristic processes in Indo-European languages is for a copy of part of the DIRECTIONAL expression in a partly-derived translatory structure to assatellate to the MOTIVE verb, giving rise to what may be termed the DIRECTIONAL or D satel-Familiar D satellites are, for example, certain instances of lite. the 'verb particle' in English, of the 'separable' or 'inseparable verb prefix' in German, and of the verb prefix in Russian and Latin. This process and some of its further derivational ramifications in English are now sketched in (12) for the DIRECTIONAL expression POR TO-ONE-SIDE-OF . Here, this expression is followed by the symbol ' > ', in effect 'pointing' to the GROUND nominal together with which the expression constitutes the DG phrase. Throughout the Appendix, this symbol is placed after every prepositional governing a nominal. We also introduce now a term which, for reasons of greater explicitness, was not used in Part I. Conflation will refer loosely to any syntactic process - whether a long derivation involving many deletions and insertions, or just a single lexicalinsertion - whereby a more complex construction turns into a simpler one. Thus, the complex construction TO α POINT which IS OF the

SURFACE OF, as shown derived in (4b), will be said to conflate into onto; likewise, the adjunction of HITHER with GO, which is shown in (11a) keying in the insertion of come, can now be said to conflate into come.

(12)

- (a) [a POINT] MOVE POR TO-ONE-SIDE-OF> [a POINT] past
- (b) \Longrightarrow [a POINT] MOVE $\langle POR TO-ONE-SIDE POR TO-ONE-SIDE-OF \rangle$ [a POINT] by past

- (c) ⇒ [a POINT] MOVE ⟨by past⟩ [a POINT]

 { by }

 { past }

 ⇒ [a POINT] MOVE ⟨by⟩ [a POINT]

 ⟨past⟩
 - [he drove by it]
 [he drove past it]
- (d) [an alternate route from (b)]
 - \implies [a POINT] MOVE \iff past> [a POINT]
 - ⇒ [a POINT] MOVE \leftarrow by \rightarrow [a POINT]

 [*he drove it bý]

- (13) Comments on the Derivation in (12):
- -- The deep structures shown in this derivation are autic and contain MOVE; the example sentences, however, are self-effective structures, based on the autic ones, and contain GO.
- -- In all the example sentences, this GO verb has conflated with a MANNER expression from outside the structure (this is not shown) to yield the surface verb drive.
- 1. -- In (12a), there is no assatellation from the DIRECTIONAL expression, so that in the bracketed surface sentence *drove* constitues the whole of the verb complex (shown with the heavy stress appropriate thereto) and *past it* is the DG prepositional phrase (shown appropriately unstressed).
- 2. -- In (12b), a copy of most of the DIRECTIONAL expression has assatellated to the MOTIVE verb where it keys in the insertion of the vadic 'particle' by. In the bracketed surface sentence, drove by now constitutes the verb complex, within which heaviest stress falls on the rightmost constituent, i.e., on the 'particle' (the satellite); past it is still the low-stressed DG phrase.
- 2'-- In (12b'), the DG phrase has deleted, leaving the verb complex alone to its left. The DG phrase can undergo such a deletion in certain cases where the contained G nominal is a deictic or anaphoric pronoun. In such a deletion, moreover, no DIRECTIONAL information is lost since the assatellated copy of the DIRECTIONAL expression

still remains in the verb complex.

- 3. -- In (12c), there takes place a derivational step perhaps unique to English, which apparently alone of Indo-European languages regularly has its D satellite and D preposition adjacent. Here, these two constituents conflate into a single constituent which might be termed a satellite-preposition. This partakes of the properties of both its 'parents': it has the heavy stress of a satellite and the pre-nominal positioning of a preposition. We have here marked this new constituent by enclosing it fore and aft with the symbols ' < ' and ' > '.
- -- An additional example of the distinction between a sentence without a satellite and with a preposition and one with a satellite-preposition is:

I could sée through> him (he was transparent)

I could see <thróugh> him (he was lying)

4. -- In (12d), we indicate that a sentence in which the GROUND-specifying nominal is the direct object arises simply by deletion of the DIRECTIONAL prepositional - a process which might accordingly be termed transitivization. The symbol '>' with no prepositional preceding it can thus be used as a marker for the direct object status of the nominal following it. The deletion which takes place in transitivization again causes no information loss since the DIRECTIONAL satellite still remains.

* * *

Of course, the particular sentence-series in (12) does not have an acceptable transitivized form:

*he drove it bý ,

but a closely related sentence-series (which is shown derived below) does have one:

he passed it bý,

and so does the Yiddish sentence-series homologous with that in (12) [here given in the present tense]:

er fort es farbáy.

A transitivized sentence which also contains a satellite, such as the acceptable English sentence just preceding, calls for a restatement in our terms of the well-known principles of 'particle' placement in English:

(14)

(a) in a sentence with a satellite and with a preposition before the GROUND nominal, the satellite cannot move over the preposition -- hence,

he drove

by past> it

cannot become

*he drove past> it ⟨by;

(b) in a sentence with a satellite and with no preposition before the GROUND nominal (such as may arise by transitivization), the satellite may move over the nominal if the latter contains a noun and must move over it if it is a pronoun -- hence, to illustrate the latter case,

he passed ⟨by > it

must become

he passed > it ←bý.

Still in the context of transitivized sentences, we may return to one such, already encountered in section 10.1. There, in (8al), it was shown that the absence in English of a DIRECTIONAL preposition like *alength, such as might occur in a sentence like

 * he walked alength the pier (in 5 minutes),

necessitates resorting to a transitivized sentence like

he walked the pier (in 5 minutes).

The derivation which yields this latter sentence can now be shown, as in (15). There, we postulate as one of the steps the formation of a D satellite which, after the deletion of the D preposition (by transitivization), itself also deletes. By these deletions, all explicit DIRECTIONAL information is lost to the surface. Even in such a circumstance, however, some DIRECTIONAL information can always

be recovered (otherwise than purely by the situational context depicted), since for any particular lexical verb -- such as walk -- only a certain few DIRECTIONAL expressions could have been deleted.

(15)

- (a) he walked ALENGTH ON> the pier
- (b) he walked <ALENGTH ALENGTH ON> the pier [by assatellation]
- (c) he walked <ALENGTH > the pier [by transitivization]

[*he walked the pier alength]

[he walked the pier (in 5 minutes)]

If, following (12 a), not a MANNER expression but an additional copy from the DIRECTIONAL expression assatellates to the MOTIVE verb, conflating with it to yield a vadic 'MD verb':

POR TO-ONE-SIDE-OF> [a POINT]

past

then there derive the forms indicated in (16), the stages of which are lettered to correspond to those of (12):

(16)

- (b) [a POINT] pass

 by past> [a POINT] [*he passed by past it]
- (c) [a POINT] pass <by> [a POINT] [he passed bý it]
- (d) [a POINT] pass <by > [a POINT]*

 [he passed it by]

[a POINT] pass <by- > [a POINT]
[he bypassed it]

It should be noted that the English morpheme by can be inserted not only onto the D satellite POR TO-ONE-SIDE, as seen above or in

(17)

(a) the ball flew by past my head,

but also onto the D satellite POR OVER, as in

(b) the ball flew by over my head.

^{*} Although it means something different, a structure parallel to this one -- containing a bound, rather than a free, satellite -- can be compared here:

But the morpheme should not be too closely identified with *POR*-containing satellites in general, since it cannot be inserted onto most others:

- (c) *the ball flew by through the hoop
- (d) *the ball flew by through the windowpane
- (e) *the ball rolled by across the border.

In Russian, however, the morpheme which most corresponds to English by -- viz., the verb prefix pro- -- should indeed be more closely identified with the POR- containing satellites, since it can be inserted onto four of these, not merely two, as demonstrated in $(18)^*$.

^{*} The Russian forms here and all other non-English forms cited in the Appendix have been either supplied by or checked with native speakers.

(18)

- (a) m'ač proletel mimo golovy
 the ball flew-by past (my) head
- (b) <u>m'ač proletel nad golovoi</u>
 the ball flew-by over (my) head
- (c) <u>m'ač proletel čerez obruč</u> the ball flew-by through the hoop
- (d) $\underline{m'a\check{c}}$ proletel $\underline{\check{c}erez}$ steklo the ball flew-by through the glass
- (e) m'ač prokatils'a čerez granicu
 the ball rolled-by across the border

Parellel to the derivation in (12) for the DIRECTIONAL expression POR TO-ONE-SIDE-OF, we now present the derivation for TO IN; here, fewer of the stages in the derivation are acceptable surface forms:

(19)

- (a) [a POINT] MOVE TO IN> [a SPHERE] into
 - → [a POINT] MOVE into> [a SPHERE]

 [Xhe walked into it]
- (b) \Longrightarrow [a POINT] MOVE \longleftrightarrow 10 IN \longleftrightarrow [a SPHERE] in into
- (b') \Longrightarrow [a POINT] MOVE \prec in [he stood at the entrance to the house, and then he walked in]

Comments:

- -- For the underlying DIRECTIONAL expression *TO IN* (and for several other expressions), it is doubtful that English any longer uses the derivational form shown in (19a) -- i.e., where there is a DG phrase but no D satellite, so that it is the verb which receives verb-complex stress (and this is not contrastive stress).
- -- It is clear that English lacks the derivational form in (19b) containing both a D satellite and a DG phrase. This form is highly positable as a deep structure, however, because it is homologous with occurrent English forms involving other DIRECTIONAL expressions, as seen in (12b) for he drove by past it, and because it is homologous with other languages' occurrent forms involving the same DIRECTIONAL expression. In fact, German has occurrent forms homologous with both (19a) and (19b), as shown in (20):

(20)

[er ging ins Haus]

(b)
$$\Longrightarrow$$
 [a POINT] MOVE $\underbrace{\text{TO IN}}_{\text{+ein}}$ $\underbrace{\text{TO IN}}_{\text{in }+-\overline{\text{acc}}}$ [a SPHERE]

[er ging ins Haus hinein]

-- The derivational form in (19b) is also highly positable as a deep stage to be passed through because deletion of the DG phrase yields

an occurrent form, as seen in (19b'),

- -- and because conflation of the D satellite and the D preposition into a satellite-preposition also yields an occurrent form, as seen in (19c).
- -- It might be noted here that the satellite-preposition just referred to, i.e., <code>into></code>, is distinct from the satellite plus preposition sequence <code>in to></code> not only grammatically but also phonologically (by such 'junctural' phenomena as segment transitions, syllable-duration rhythm, etc.), as observable in (21):

(21)

- (a) I walked ←into> him (he was a giant with an opening)
- (b) I walked ⟨in to⟩ him (he was sitting in his room).

* * *

For a third illustration, we present in (22) the derivation for the underlying prepositional WITH, which, though this expression is not strictly a DIRECTIONAL, parallels the derivations in (12) and (19). As with (12), each stage of the derivation yields, upon vadic insertion, an acceptable surface sentence. In (22), moreover, the homologous insertions and exemplary sentences for two languages -- English and Yiddish -- are shown simultaneously.

(22)

(a) MOVE $\underbrace{\text{WITH}}$ E: with he's coming with me Y: mit er kúmt mit mir

(b) \Longrightarrow MOVE \longleftrightarrow WITH \longleftrightarrow he's coming along with me Y: mit mit er kumt mit mit mit

(c) → MOVE ←WITH WITH>

E: along with with he's coming with me

Most of Russian's surface translatory sentences are obligatorily of the form at the (b) stage [or, after deletion, at the (b') stage] of the derivations shown above for English, German, and Yiddish. That is, they contain both a D satellite and a D prepositional [or contain just the D satellite after deletion of the DG phrase]. This is illustrated for the DIRECTIONAL expression TO IN in (23):

(23)

(b)
$$\Longrightarrow$$
 [a POINT] MOVE \leftarrow TO IN TO IN> [a SPHERE] $v-v+-\overline{acc}$

(b')
$$\Longrightarrow$$
 [a POINT] MOVE $\underbrace{TO \ IN}_{V}$

In (24) we now present a number of Russian's D satellite plus D prepositional combinations. It may be noted that for most of the combinations the satellite has the same phonological shape as the preposition and thus reflects at the surface its derivational origin as a copy from the underlying DIRECTIONAL expression. In the format used in (24), each Russian D combination appears on the left and is exemplified in a Russian sentence (with a sublinear translation) to its right. Under each Russian D combination appears the closest English equivalent(s) -- this variously turns out to be simply a preposition, a satellite plus a preposition, a satellite-preposition, a phrase, or non-existent (as in (24 i), where a devised bathic equivalent is shown). Each English DIRECTIONAL form is exemplified to its right in an English sentence. Here, the lexical GROUND

nominal is given in parentheses and only its pronominalization appears in the sentence proper so that the right conditions can be present in which stress placement reveals the type of the DIRECTIONAL form.

While the English sentence's first responsibility is to provide a suitable showcase for the English DIRECTIONAL form under illustration, we have additionally tried to make it as close an equivalent of the Russian sentence as possible. Asterisks mark those entries in (24) which are commented upon in (25).

(24)

- (a) $\forall v v + -\overline{acc}$ on $\underline{vbeža1} \ \underline{v} \ \underline{dom}$ he ran-in into the house (acc) $\forall into \rangle$ he ran into it (the house)
- (b) <na- na + -acc> on nastupil na zme'u
 he stepped-on onto the snake (acc)

 ←onto> he stepped (down) onto it (the snake)
- (c)* <na- na + -acc> my nabreli na derevn'u
 we wandered-on onto a village (acc)

 onto> we wandered onto one (a village)

 upon> we happened upon it

 across> we stumbled across it

(d)* $\langle na-na+-\overline{acc} \rangle$ my napali na vraga we fell-on onto the enemy (acc)

upon> we fell upon them (the enemy)

we rode upon them (the enemy)

(e) <ob- ob + -acc> on oblokotils'a o stenu he leaned-against against the wall (acc)

against> he leaned against it (the wall)

(f) <pod- pod + -acc> <u>šarik</u> <u>podkatils'a pod krovat'</u> the ball rolled-under under the bed (acc)

funder> the ball rolled under it (the bed)

 $(g)^* \langle za - za + -\overline{acc} \rangle$ mes'ac <u>zašël</u> <u>za tuču</u> the moon went-'za' 'za' the cloud (acc)

on zaplyl za mol he swam-'za' 'za' the breakwater (acc)

(h)* <pri- k + -dat> on prikolol izveščenie k doske he pinned-fast the notice to the board (dat)

vetka primerzla k oknu
the twig froze-fast to the window (dat)

(<fast) to> he pinned the notice (fast) to it (the board)
<stuck to> the twig froze stuck to it (the window)

(i)* \neq pri- k + $-\overline{dat}$ on priexal k granice he drove-INTO-ARRIVAL to the border (dat)

** (INTO-ARRIVAL at the border oriving, he WENT (INTO-ARRIVAL at the border arrived)

(j) <pod k + -dat> on podbežal ko mne he ran-'up' to me (dat)

 $\{up(-)to\}$ he ran up(-)to me

(k)* <do- do + -gen> on došël do Kieva he walked-'do' 'do' Kiev (gen)

> on doplyl do berega he swam-'do' 'do' shore (gen)

all the way to he walked all the way to Kiev
he swam all the way to shore
(or, closer to the Russian sense:)
walking, he made it (got) all the way to Kiev
swimming, he made it (got) all the way
(back) to shore

- (1) ⟨vy- iz + -gen⟩ on vybežal iz doma

 he ran-out out-of the house (gen)

 ⟨out-of⟩ he ran out-of it (the house)

- (o) <ot- ot + gen> on otbežal ot men'a
 he ran-'ot' from me (gen)

 on ot⋅exal ot moei mašiny
 he drove-'ot' from my car (gen)

 on otošel ot okna
 he walked-'ot' from the window (gen)
 - he ran off a ways from me (and stopped)

 he moved away a bit from my car

 (he had been parked too close)

 he stepped back a ways from the window

 (he had been standing too close)
- (p)* ←ot- ot + -gen> on otkolol izveščenie ot doski
 he unpinned the notice from the board (gen)

 ←un- from> he unpinned the notice from the board

- (25) Comments on the entries in (24):
- 1. -- In (24 c), the DIRECTIONAL expression underlying the Russian and all the English D surface-forms -- however it is best represented in bathic morphemes -- may be taken to specify a sematic area something like

'into encounter with/discovery of'.

Here and in a number of other cases, it can be seen that semantic notions which are not strictly DIRECTIONAL have found their way into the specificational area of what is perhaps still best syntactically characterized as an underlying 'DIRECTIONAL expression'. Where in an underlying structure such semantic notions are most appropriately specified and how such underlying portions subsequently move into the DIRECTIONAL expression are not considered here.

2. -- In (24 d), the DIRECTIONAL expression underlying the Russian and the English D surface-forms may be taken to specify a semantic area something like

'into assault upon'

3.-- As a locative prepositional, the Russian expression za + -pre means

'on the other side of (from the speaker)'

and hence is more general than the closest single-word English equivalents behind, beyond and across, as used in such sentences as

he's behind the tree, he's beyond the breakwater, he's across the river. The Russian satellite + prepositional combination shown in (24 g) -- i.e., $\langle za-za+-acc \rangle$ -- also has this more general DIRECTIONAL meaning, but in addition specifies a particular semantic increment, so that the meaning of the whole can be represented as:

'into occultation/inaccessibility on the other side of'.

Thus, the meaning of the Russian sentences in (24 g) is perhaps most closely represented in English by such 'rendered translations' as

the moon went + into-occulatation on-the-other-side-of the cloud

he swam + into-inaccessibility on-the-other-side-of the breakwater

or by such 'casual translations' as

the moon disappeared behind the cloud he swam dangerously far beyond the breakwater.

4. -- In (24h), the DIRECTIONAL expression underlying the Russian and the first English D surface-forms may be taken to specify a semantic area something like

'into attachment (affixment) to'.

In fact, 'into attachment' appears to have been precisely one of the meanings of the obsolescent English satellite fast. This satellite is here shown in parentheses, however, because, in modern English, any sentence with an appropriate DG phrase can as well omit as contain

fast in this meaning; thus, e.g.,

he nailed the board fast to the wall and he nailed the board to the wall.

If the DG phrase has been deleted, however, the satellite cannot be omitted; thus,

he nailed the board fast but *he nailed the board.

-- The second English form, <stuck to>, specifies a narrower semantic area than the first form. It is not as close an equivalent of the Russian form, but it can be an appropriate translation thereof when, in the actual situation specified, the DIRECTIONAL falls within the requisite narrower area -- as is the case in the lower sentence of the exemplary pairs.

5. -- In (24i), it can be seen that Russian has a D surface-form which exactly specifies the DIRECTIONAL semantic area

'into arrivalat (to)'.

The underlying MOVE verb is thereby left free to conflate with a MAN-NER expression, yielding, e.g., the vadic Mm verb drive (exat').

English lacks such a D surface-form and must, to express the DIRECTIONAL notion at all, conflate the MOVE verb with the underlying D satellite, yielding the vadic MD verb arrive.

6. -- In (24k), the DIRECTIONAL expression underlying the Russian D

surface-form may be taken to specify a semantic area something like

'counteroppositionally all the way to'.

Since the English expression all the way to does not necessarily include the 'counteroppositional' notion, the first two English illustrative sentences do not quite render the Russian sentences. However, since the English verbal expressions make it and get do include the additional notion -- and, in fact, may be regarded as conflations from GO plus COUNTEROPPOSITIONALLY -- the second pair of English sentences does render the Russian more closely. In using these verbal expressions, of course, English can no longer conflate a MANNER expression like by walking or by swimming into the verb -- a limitational circumstance already noted for the case of 'arriving' in comment 5.

7. -- In (24n), the DIRECTIONAL expression underlying the Russian (if not exactly the English) D surface-form seems to specify a semantic area something like

'into issuance/emanation/emission from'.

8. -- In (24p), the DIRECTIONAL expression underlying the Russian and the English D surface-forms may be taken to specify a semantic area something like

'out of attachment to',

or, equivalently,

'into detachment from'.

* * *

Two underlying DIRECTIONAL prepositionals in Russian have derivational characteristics different from those just discussed. These prepositionals are ABOUT -- a form not treated in section 10.1 meaning 'all about, here and there, through various points' -- and ALONG. When either of these appears in an underlying DIRECTIONAL expression, a copy assatellates to the MOVE verb and then -- instead of keying in a distinct prefixal morpheme -- conflates with it to yield a special form of the MOVE verb, as sketched in (26). The further conflation of this special form with a MANNER expression -- such as one specifying 'running', 'flying', 'walking', 'riding', etc. -- yields a vadic verb known in standard grammatical treatments of Russian as the 'indeterminate' or the 'determinate' form of a motion verb, as sketched in (27) and exemplified in (28). It should be noted that these verb forms are fully comparable to those illustrated in (24) except that they have their own D satellite conflated within them.

(26)

(A)

- (a) [a POINT] MOVE ABOUT ON> [a PLANE]
- (b) \Longrightarrow [a POINT] MOVE \overleftarrow{ABOUT} ABOUT ON> [a PLANE] $\overleftarrow{MOVE}_{\mbox{INDET}}$ po + $-\mbox{dat}$

(B)

- (a) [a POINT] MOVE ALONG ON> [a LINE]
- (b) \Longrightarrow [a POINT] MOVE \Leftarrow ALONG \longrightarrow [a LINE] MOVE DET po + \rightarrow dat

(27)

- MOVE (M) <ABOUT (D) <RUNning (m)

 MOVE | NDET (MD) <RUNning (m)

 begat' (MDm)
- (b) MOVE (M) ←ALONG (D) ←RUNning (m)

 MOVE (MD) ←RUNning (m)

 bežat' (MDm)

(28)

(a)
$$\frac{\text{on begal}}{\text{he ran-about about-on the street (dat)}} \frac{\text{po}}{\text{for 20 minutes}}$$

he ran (all) about/around (on) the street (for 20 minutes)

(b)
$$\underline{\text{on bežal}}$$
 $\underline{\text{po}}$ $\underline{\text{ulice}}$ $\underline{\text{(20 minut)}}$ he ran-along along-on the street (dat) for 20 minutes)

he ran along (on) the street (for 20 minutes)

Now, the derivational characteristics in Russian of underlying DIRECTIONAL expressions containing ALONG and of those containg ALENGTH form a fascinating comparison. In the former case, as already seen in (26B), a copy of ALONG assatellates to and conflates with MOVE, while the original DIRECTIONAL expression keys in a vadic prepositional complex. This process is sketched in (29) and then exemplified in (30) for three different DIRECTIONAL expressions containing ALONG. In the latter case, a copy of the whole ALENGTH-containing DIRECTIONAL expression assatellates to MOVE, there keying in a distinct prefixal morpheme, while the original DIRECTIONAL expression deletes -- that is to say, transitivization takes place. It may be assumed that in the vacancy left by the deletion the prepositional formative $-\overline{acc}$ is later transformationally introduced. This process is sketched in (31) and then exemplified in (32) for four different DIRECTIONAL expressions containing ALENGTH -- the first three parallel to those shown for ALONG. the derivational sketches which follow, parentheses placed around forms either indicate deletion or irrelevance to a particular conflation;

for clarity, AROUND is used instead of TO-ONE-SIDE-OF [a POINT], and ACROSS is used instead of ON [a BOUNDED PLANE].

(29)

- (a) MOVE ALONG ON> \Longrightarrow MOVE \rightleftarrows ALONG ON> \Longrightarrow MOVE \rightleftarrows DET po + \lnot dat
- (b) MOVE ALONG INSIDE> \Longrightarrow MOVE \Leftrightarrow ALONG (ALONG) INSIDE> \bigvee + \bigvee Prep
- (c) MOVE ALONG AROUND> \longrightarrow MOVE \leftarrow ALONG (ALONG) AROUND> \longrightarrow MOVE \longrightarrow Vokrug + \rightarrow gen

(30)

- (a) on be $\frac{v}{2}$ po ulice he ran-along along-on the street (dat) for 20 minutes
- (b) butylka plyla v trube the bottle floated-along in the pipe (prep) $\frac{20 \text{ minut}}{\text{for 20 minutes}}$
- (c) $\frac{\text{satelit}}{\text{the satellite flew-along around the earth(gen)}} \frac{\text{letel}}{\text{for three days}} \left(\frac{3 \text{ dn'a}}{\text{for three days}}\right)$

(31)

- (a) MOVE ALENGTH ON> \Longrightarrow MOVE <<u>ALENGTH ON</u> (ALENGTH ON)> pro-
- (b) MOVE ALENGTH INSIDE> → MOVE <ALENGTH INSIDE (ALENGTH INSIDE)>

 pro-
- (c) MOVE ALENGTH AROUND> → MOVE <ALENGTH AROUND (ALENGTH AROUND)> ob-
- (d) MOVE ALENGTH ACROSS> → MOVE ←ALENGTH ACROSS (ALENGTH ACROSS)> pere-

(32)

- (a) on probežal (vs'u) ulicu v 30 minut

 he length-ran the (whole) street (acc) in 30 minutes
- (b) <u>butylka</u> <u>proplyla</u> <u>trubu</u> <u>v 30 minut</u> the bottle through-floated the pipe (acc) in 30 minutes
- (c) satelit obletel zeml'u v 3 casa the satellite circum-flew the earth (acc) in 3 hours
- (d) on perebežal ulicu v 5 sekund he cross-ran the street (acc) in 5 seconds

NB: In (31b and d), the original DIRECTIONAL expression has the option of keying in the prepositional $\check{c}erez + -\overline{acc}$ instead of deleting, so that, in (32b and d), ' $\check{c}erez$ ' can be inserted before the final through/across

nominal.

It seems likely, from casual inspection of various languages, that the derivational patterns just seen for ALONG- and ALENGTH-containing DIRECTIONAL expressions in Russian are Indo-European in origin and pan-Indo-European in original distribution, however much the system may have subsequently eroded in various languages. (As one particular note, it seems likely that in the ALENGTH case the assatellated DIRECTIONAL expression always keyed in an 'inseparable', rather than a 'separable', prefix to the verb in Germanic languages.)