Dutch, PPs, ʀ-pronouns

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1 Introduction

The puzzle is the following. In mismatching free relatives we sometimes see *met wat* and sometimes *waarmee*.

(1)   a.   Ik heb gekocht waar jij   mee schildert.
           I   have bought where you with paint
           'I bought what you are painting with.'
      b.   *Ik heb gekocht met wat   jij   schildert.
           I   have bought with what you paint
           'I bought what you are painting with.'

(2)   a.   *Ik schilder waarmee   jij   hebt gekocht.
           I   paint   where with you have bought
           'I paint with what you bought.'
      b.   Ik schilder met wat   jij   hebt gekocht.
           I   paint   with what you have bought
           'I paint with what you bought.'

A few things should be noticed here. First, *met wat* and *waarmee* appear in a complementary distribution. Second, *waar* in *waarmee* means *where*, but *waarmee* does not express a location. Third, the preposition *met* changes into *mee*.

   This paper: *waarmee* is the default realization of an instrumental when all features form a constituent. If not, then *met wat*. The *r* in ʀ-pronouns does not necessarily express ʟᴏᴄᴀᴛɪᴠᴇ, in *waarmee* is only expresses ᴛʜɪɴɢ. The change of *met* into *mee* is a reflex of stranded features/a different spellout of features.

   Unmarked examples are constructed and have been verified by native speakers.

2 Conditions for *waarmee* and *met wat* to appear

Repeating the first example from the introduction. What we see here is embedded clause verb requires its object to be an instrumental and the main clause verb wants an accusative object. *waarmee* is correct weer, *met wat* is not.

(3)   a.   Ik heb gekocht waar jij   mee schildert.
           I   have bought where you with paint

'I bought what you are painting with.'
b. *Ik heb gekocht met wat jij   schildert.
I   have bought with what you paint
'I bought what you are painting with.'

Waarmee is ʀ-pronoun, a term introduced by van Riemsdijk, 1978. ʀ-pronouns are not specific to the inanimate relative pronouns. No inanimate pronominal elements in Dutch is able to act as the object of a preposition. They are all replaced by an ʀ-pronoun. As suggested by the name, ʀ-pronouns always contain the morpheme *r*.

Dutch has the personal pronouns *haar* 'her', *hem* 'him' and *het* 'it' that can be used as animate and inanimate objects of verbs, as illustrated in (4).

(4)   Objects of verbs
       a.   Ik zie haar/hem.
             I   see her/him
             'I see her/him.'
       b.   Ik zie 't.
             I   see it
             'I see it.'

The example in (5a) shows that for animate objects the same pronouns (*haar* 'her' and *hem* 'him') appear as objects of prepositions. However, the inanimate personal pronoun *het* 'it' cannot be used as an object of a preposition, shown in (5b). Instead, an ʀ-pronoun appears. This is illustrated in (5c).

(5)   Objects of prepositions
       a.   Ik schilder samen   met haar/hem.
             I paint   together with her/him
             'I am painting together with her/him.'
       b.   *Ik schilder met het.
             I   paint   with a   brush
             'I am painting with it.'
       c.   Ik schilder er-mee.
             I paint   *er*-with
             'I am painting with it.'

met is not the only preposition with which this happens.

(6)   a.   Ik zit er-op.
             I   sit it-on
             'I am sitting on it.
       b.   *Ik zit op 't.
             I   sit on it
             'I am sitting on it.

(7)   a.   Hij zwemt er-in.
             He swims it-in
             'He is swimming in it.'

b. *Hij zwemt in 't.
   He swims in it
   'He is swimming in it.'

Waarmee and not *met wat* also appears in other contexts. (8) shows matching headless free relatives, (9) shows headed relatives, (10) gives wh-questions. The use of *met wat* is ungrammatical here, and *waarmee* should be chosen.

(8)　Matching headless relatives
　　a.　Ik schilder waar　jij　ook mee schildert.
　　　　I　paint　　*w-aa-r* you also with paint
　　　　'I am painting with what you are painting with too.'
　　b.　*Ik schilder met　wat　jij　ook schildert.
　　　　I　paint　　with what you also paint
　　　　'I am painting with what you are painting with too.'

(9)　Headed relatives
　　a.　Ik schilder met　de　kwast waar-mee　jij　ook schildert.
　　　　I　paint　　with the brush *w-aa-r*-with you also paint
　　　　'I am painting with the brush that you are painting with too.'
　　b.　*Ik schilder met　de　kwast met　wat　jij　ook schildert.
　　　　I　paint　　with the brush with what you also paint
　　　　'I am painting with the brush that you are painting with too.'

(10)　Wh-question
　　a.　Waar-mee　　schilder jij?
　　　　W-aa-r-with paint　　you
　　　　'What are you painting with?'
　　b.　*Met　wat　schilder jij?
　　　　With what paint　　you
　　　　'What are you painting with?'

What this shows is that in principle *waarmee* is used, it is the default. What is special about the examples in which *met wat* is used then? I suggest that it is the constituency. *Waarmee* needs to be a constituent. I repeated the *waarmee* example. Here *waar* and *mee* are both part of the embedded clause. I show later that at some point in the derivation they were part of a proper constituent. They formed a constituent without any other elements.

(11)　a.　Ik heb　gekocht [waar jij　mee schildert].
　　　　　I　have bought　where you with paint
　　　　　'I bought what you are painting with.'
　　　b.　*Ik heb　gekocht [met wat　jij　schildert].
　　　　　I　have bought　with what you paint
　　　　　'I bought what you are painting with.'

Now I repeat the *met wat* example. Here *wat* is part of the embedded clause but *met* is not. It belongs to the main clause. An embedded clause is finished before the main

clause is built. At no point in the derivation can *met wat* form a proper constituent.

(12) a. *Ik schilder [waar]mee [jij hebt gekocht].
          I paint   where with you have bought
          'I paint with what you bought.'
      b. Ik schilder met [wat jij   hebt gekocht].
          I paint   with what you have bought
          'I paint with what you bought.'

There are actually more examples of *wat* following *met* in which *met* and *wat* do not form a constituent without containing any other elements. First, *wat* is an indefinite that takes an NP complement, and only then it is combined with the *met*. Second, *wat* combines with *voor* and then combines with an NP complement en then with *met*. *Met* and *wat* are never a constituent to the exclusion of everything else.

(13) a. Ik wil   graag thee met wat   suiker.
          I want please tea   with some sugar
          'I would like to have tea with some sugar.'
      b. [Met [wat [voor [potloden]]] teken jij?
          with what for   pencils   draw you
          'What kind of pencils do you with?'

In conclusion:

(14) a. *[[met] [wat]] → [waarmee]
      b. [met [wat X]]
      c. [met [wat [X]]]

3   Connecting *wat* to *waar* and *met* to *mee*

So, *waarmee* and *met wat* realize the same features but their spellouts differ.

(15) a. Ik heb gekocht [waar jij   mee schildert].
          I have bought where you with paint
          'I bought what you are painting with.'
      b. Ik schilder met [wat jij   hebt gekocht].
          I paint   with what you have bought
          'I paint with what you bought.'

A few things should be noted here. First, position of the elements: the regular pronoun follows the adposition and the ʀ-pronoun precedes the preposition. Second, the shape of the wh-pronoun: the ʀ-pronoun differs from the non-ʀ-pronoun in the lengthening of the vowel that the final consonant is *r*. Third, the shape of the adposition: *met* and *tot* change in *mee* and *toe* when they combine with ʀ-pronouns.

   Now let's look at it like this: *waarmee* realizes particular features. Say *waar* expresses A and B and *mee* expresses C and D. Say, A B C and D. *met wat* realizes the same features. Saying that *wat* also realizes A and B and *met* also C and D misses

the point of having different realizations. So instead, say *wat* only realizes A and *met* realizes B, C and D. Or *wat* realizes A, B and C and *met* only realizes D. In both cases all features are expresses, but they are distributed differently, allowing for different realizations.[1]

Table 1: Distribution options

A	B	C	D
met		*wat*	
mee	*waar*		
	mee		*waar*

I will argue for the last option, that *met* spells out fewer features than *mee*. The main argument for that comes from the fact that Dutch is a non-preposition stranding language, so prepositions cannot be moved out of the PP. Also, you cannot move the complement of a P to its spec, but you can subextract from them (Abels). And I show that ʀ-pronouns behave like clitic in how high they move.

In a nutshell, if all features are merged at once, we will always get an ʀ-pronoun. Due to spellout driven movement the ʀ-pronoun strands the features to be realizes by a preposition and a little more. The ʀ-pronoun is a clitic and moves high. The preposition + a little more realizes as *mee* in case of *waarmee*. Now if the features are not merged all at once, the regular spellout driven movements cannot take place, and we see *met wat*. So, the answer of how constituency connects to change in phonological form lies in one of the core assumptions of nanosyntax: phrasal spellout spells out constituents.

(16) a. *waar* = w + a + r
      b. *wat* = w + a + t

So the difference betwween *t* and *r* was actually the only difference we need to account for.

Dutch is a non P-stranding language.

(17) a. Met wie heb jij   gedanst?
          with who have you danced
          'Whom did you dance with?'
      b. *Wie heb jij   gedanst met?
          who have you danced with

---

[1]I did not address the ordering difference of the elements. Yes, this can lead to a difference in meaning.

(i)   a. Ik klim   in de boom.
          I   climb in the tree
          'I am climbing in the tree.'
      b. Ik klim   de boom in
          I   climb the tree   in
          'I am climbing into the tree.'

Here, however, I will argue that the movement is driven by spellout and is meaningless.

'Whom did you dance with?'

Abels shows that extraction from a PP is not categorically excluded. It happens in Slavic.

–examples here–

What if ʀ-pronouns are actually clitic? And they pattern with Slavic in that they clitic can never follow Ps.

Do we have more reasons to believe that ʀ-pronouns are clitics? The non-wh ʀ-pronouns in Dutch are able to move very high, just like clitics and unlike regular pronouns in Dutch.[2]

(18) a. Ik heb veel geld   aan de badkamer uitgegeven.
          I have much money on the bathroom spent
          'I spent a lot of money on the bathroom.'
      b. Ik heb er   veel geld   aan uitgegeven.
          I have there much money on spent
          'I spent a lof of money on it.'

(19) a. Ik heb veel geld   aan mijn zoon uitgegeven.
          I have much money on my   son spent
          'I spent a lof of money on my son'
      b. Ik heb veel geld   aan hem uitgegeven.
          I have much money on him spent
          'I spent a lot of money on him.'
      c. *Ik heb **hem** veel geld   aan uitgegeven.
          I have him much money on spent
          'I spent a lof of money on it.'

This has shown that *er* is small, smaller than regular pronouns. So we go for this option:

A	B	C	D
met		*wat*	
mee		*waar*	

Table 2: *er* < *'t*

As a result of *waar* being small, *mee* becomes big. And *mee* spells out more features than *met*.

Now the difference in distribution between *met wat* and *waarmee* is going to follow from spellout. If we get higher than dative case, we need prepositions. Making prepositions is a very 'costly' operation in the langauge, it is the last resort option in the spellout procedure. Dutch also has forms that are not only prepositions, but can also function as postpositions. They are less 'costly'. To avoid building a complex specifier, different spellout options are used. That is why we get the ʀ-pronoun in the picture. ʀ-pronouns can combine with these postpositions.

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[2](19c) can also be excluded by saying that *aan* and *hem* cannot split.
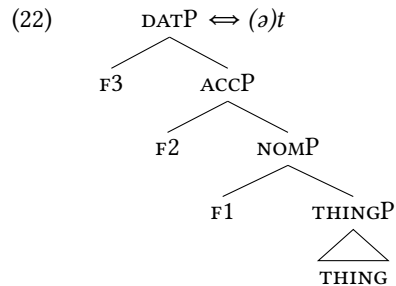
4 Taking *waarmee* and *met wat* apart

't 'it' from (22) can be used as subject, direct object and indirect object.

(20) a. 't   Staat   in de hal.
          3SG.N.NOM stands in the hallway
          'It is standing in the hallway.'

      b. Ik zie 't.
          I   see 3SG.N.ACC
          'I see it.'

      c. Ik heb   't   een klap gegeven.
   I   have 3SG.N.DAT a   hit   given
          'I hit it.'

Pronouns in other genders alternate between nominative (non-oblique) and accusative/dative (oblique) in these contexts.

(21) a. Hij   staat   in de hal.
          3SG.M.NOM stands in the hallway
          'He is standing in the hallway.'

      b. Ik zie hem.
          I   see 3SG.M.ACC
          'I see it.'

      c. Ik heb   hem   een klap gegeven.
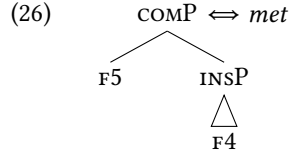   I   have 3SG.M.ACC a   hit   given
          'I hit him.'

(22)   DATP ⟺ *(ə)t*
           ╱   ╲
         F3   ACCP
               ╱   ╲
             F2   NOMP
                   ╱   ╲
                 F1   THINGP
                        △
                      THING

Er can be used as a locative.

(23) Ik ben er   al   geweest.
      I   am there already been
   'I have already been there.'

(24)   LOCP ⟺ *(ə)r*
             ╱   ╲
       LOCATION   THNGP
                   △
                 THING
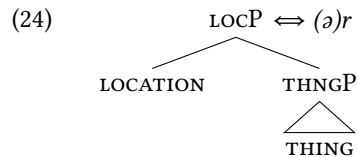
Met can be used for as instrumental or comitative.

(25) Ik dans   met hem.
      I   dance with him
      'I am dancing with him.'

(26)   COMP ⟺ *met*
         ╱   ╲
       F5   INSP
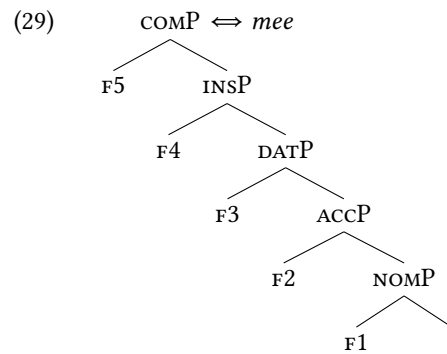   △
               F4

Either way, it combines with accusative/dative (oblique), which can be seen on the pronouns. But only for the comitative, because for the instrumental we are getting an ʀ-pronoun. Full DPs do not show any marking, leading me to postulate the zero marker up to the dative.

(27)   a.   Ik dans   met de man.
            I   dance with the man
            'I am dancing with the man.'
       b.   Ik schilder met een kwast.
            I   paint   with een brush
            'I am painting with een brush.'

(28)   DATP ⟺ ∅
         ╱   ╲
       F3   ACCP
              ╱   ╲
            F2   NOMP
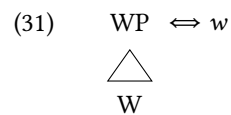   ╱ ╲
                   F1
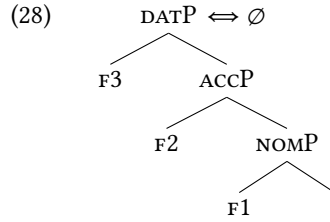
So *met* expresses F4, and *(ə)r* expresses THING and F1 to F1. *(ə)r* only expresses THING. *Ermee* and *met 't* express the same features, which leaves F1 to F4 for *mee*.

	F4	F3	F2	F1	THING
met			(ə)t		
mee					(ə)r

Table 3: *met 't* and *ermee*

(29)   COMP ⟺ *mee*

```
            COMP
          /      \
        F5       INSP
               /      \
             F4       DATP
                    /      \
                  F3       ACCP
                         /      \
                       F2       NOMP
                              /      \
                            F1
```
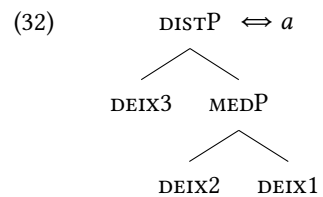
a/*aa* is distal, *ie*/*i* is proximal. Medial?

(30)   a.   h-ie-r
            here
            'here'
       b.   d-aa-r
            there
            'there'
       c.   d-i-t
            this
            'this'
       d.   d-a-t
            that
            'that'

(31)   WP ⟺ *w*

```
      /\
     /__\
      W
```

WP is the interrogative/wh, whatever.

(32)   DISTP ⟺ *a*

```
          /      \
      DEIX3      MEDP
               /      \
           DEIX2      DEIX1
```

5   Derivation

Spellout

(33)   Merge F and
       a.   Spell out FP

      b.   If (a) fails, attempt movement of the spec of the complement of F, and retry (a)

      c.   If (b) fails, move the complement of F, and retry (a)

(34)   Cyclic Override
Lexicalisation at a node XP overrides any previous match at a phrase contained in XP.

(35)   Backtracking
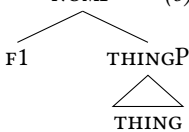When spellout fails, go back to the previous cycle, and try the next option for that cycle.

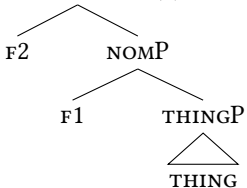The functional sequence of *ermee*.

(36)   F4 > F3 > F2 > F1 > THING

We start with THING. This is realized as *(ə)r*, because it has less junk than *(ə)t*.

(37)   THINGP ⟺ *(ə)r*

$$\bigtriangleup$$
THING

F1 is merged. *(ə)r* is no longer a candidate, but *(ə)t* is. So the spellout is overridden.

(38)   NOMP ⟺ *(ə)t*

F1   THINGP

$$\bigtriangleup$$
THING

F2 is merged, which can still be realizd by *(ə)t*.

(39)   ACCP ⟺ *(ə)t*

F2   NOMP

F1   THINGP

$$\bigtriangleup$$
THING

Idem for F3.

(40)

```
        DATP ⟺ (ə)t
       /    \
     F3     ACCP
           /    \
         F2     NOMP
               /    \
             F1    THINGP
                     △
                   THING
```
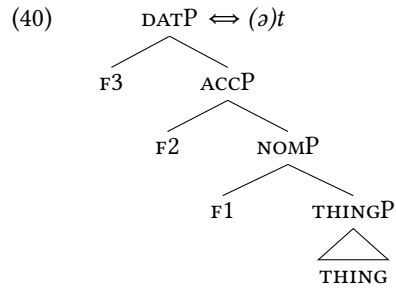
Now F4 is merged. No candidate for phrasal spellout, no candidate after complement movement.

(41)   a.

```
            INSP ⟺
           /    \
         F4     DATP
               /    \
             F3     ACCP
                   /    \
                 F2     NOMP
                       /    \
                     F1    THINGP
                             △
                           THING
```

     b.

```
              DATP ⟺ (ə)t   INSP ⟺
             /    \          |
           F3     ACCP      F4
                 /    \
               F2     NOMP
                     /    \
                   F1    THINGP
                           △
                         THING
```
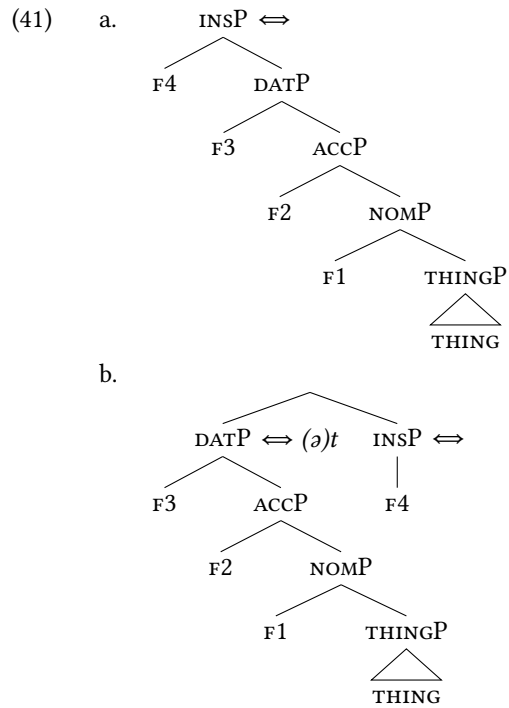
The next step in the algorithm is backtracking. We try the next option for the cycle in which F3 was merged. This option is complement movement. However, there is no lexical entry that fits, so we try the next option.
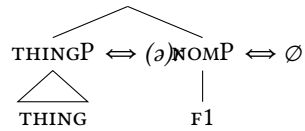
    show here

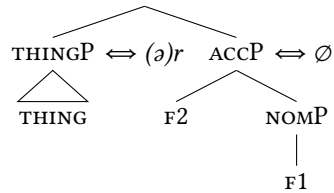   The exact same happens for F2.

    show here

    Now for F1 it is different. There is a candidate when we try complement move-mement, namely THING is realized as *(ə)r* and F1 is spelled out as ∅
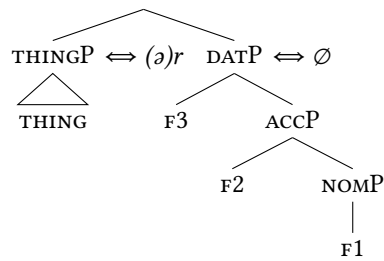
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(42)

THINGP ⟺ (ə)NOMP ⟺ ∅

    THING   F1

Merge F2, there is no candidate for phrasal spellout, we try spec to spec movement and get a match:

(43)

THINGP ⟺ (ə)r   ACCP ⟺ ∅

   THING   F2   NOMP

                  F1

Idem for F3.

(44)

THINGP ⟺ (ə)r DATP ⟺ ∅

   THING   F3   ACCP

             F2   NOMP
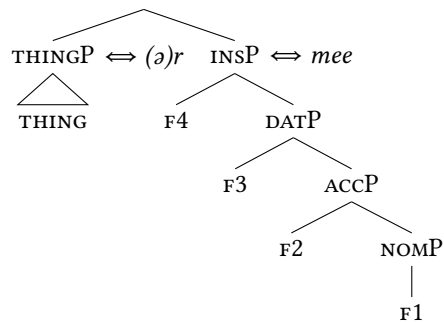
                  F1

Now F4 is merged. No phrasal spellout, but there is a match after spec-to-spec movement. However, is is not ∅ anymore, but the inserted morpheme is *mee*.

(45)

THINGP ⟺ (ə)r INSP ⟺ *mee*

   THING   F4   DATP

          F3   ACCP

             F2   NOMP

                  F1

Then show here that this does not happen if not all features form a proper constituent. Spellout can just not target a constituent.

    Open issues:

- I still need to incorporate *a* and *w*. They can either come before case or after it.

- Right now I do not capture the formal similarity between *met* and *mee*. I have ideas about that:

- Some adpositions do not change shape. They should be usable both as prepositions and postpositions. This should be reflected in their lexical entry. A prediction is that there exist adpositions that cannot be used as postpositions. Examples of that are: *zonder*, *midden*, *sinds*, *rond*, *beneden*.

6   Conclusion

References

van Riemsdijk, Henk (1978). *A Case Study in Syntactic Markedness*. Lisse: Peter de Ridder.