

# Tense and modality

Hans Broekhuis (Meertens Institute) & Henk Verkuyl (UiL-OTS)  
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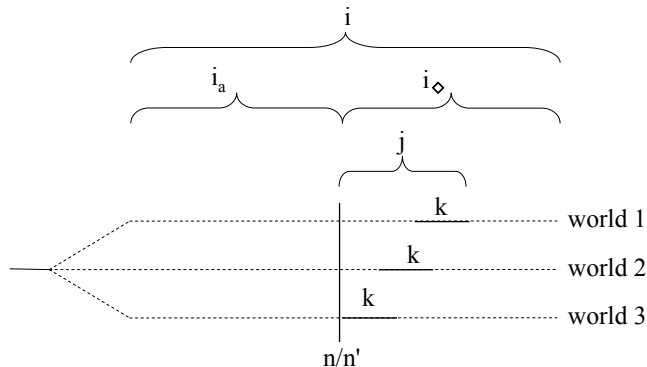
## 1 Binary Tense theory

- (1) a. [±PAST]: present versus past  
 b. [±POSTERIOR]: future versus non-future  
 c. [±PERFECT]: imperfect versus perfect

Table 2: The traditional view on the Dutch tense system

		PRESENT	PAST
SYNCHRONOUS	IMPERFECT	simple present <i>Ik wandel</i> I walk	simple past <i>Ik wandelde</i> I walked
	PERFECT	present perfect <i>Ik heb gewandeld</i> I have walked	past perfect <i>Ik had gewandeld</i> I had walked
POSTERIOR	IMPERFECT	future <i>Ik zal wandelen</i> I will walk	future in the past <i>Ik zou wandelen</i> I would walk
	PERFECT	future perfect <i>Ik zal hebben gewandeld</i> I will have walked	future perfect in the past <i>Ik zou hebben gewandeld</i> I would have walked

### Conventions used in this talk:



----- time line

world n: possible world

n: speech time (defining the present tense interval)

n': virtual "speech" time in the past (defining the past tense interval)

i: present/past tense interval

i<sub>a</sub>: actualized part of the present/past tense interval

i<sub>ø</sub>: non-actualized part of the present/past tense interval

k: eventuality/event time interval

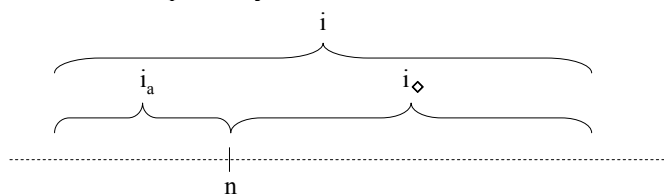
———: represents [-perfect] event interval k

———|: represents [+perfect] event interval k

j: the time span within which the eventuality denoted by the tenseless predication is located (present of the eventuality k)

## 1.1 Present Tense interval

- (2) a. Els werkt deze week aan de paragraaf over het temporele systeem. [present]  
 Els works this week on the section about the tense system  
 ‘This week, Els is writing the section on the tense system.’
- b. Gisteren heeft ze de algemene opbouw vastgesteld. [present perfect]  
 yesterday has she the overall organization prt.-determined  
 ‘Yesterday, she has determined the overall organization.’
- c. Vandaag schrijft ze de inleiding. [present]  
 today writes she the introduction  
 ‘Today, we are writing the introduction.’
- d. Daarna zal ze de acht temporele vormen beschrijven. [future]  
 after.that will she the eight tense forms describe  
 ‘After that, she will describe the eight tense forms.’
- e. Ze zal het zaterdag wel voltooid hebben. [future perfect]  
 she will it Saturday prt. completed have  
 ‘She probably will have finished this section on Saturday.’

Figure 1: The present tense interval  $i$ 

- (3) a. Els werkt al jaren aan een grammatica van het Nederlands. De eerste delen  
 Els works already for.years on a grammar of the Dutch the first parts  
 zijn al afgerond en ze begint nu aan het deel over het werkwoord.  
 are already prt.-finished and she starts now with the part on the verb  
 Deze week werkt ze aan de paragraaf over het temporele systeem [continue as in (2b-d)]  
 this week works she on the section about the temporal system  
 ‘Els has been working for years on a grammar of Dutch. The first volumes are already finished  
 and she is beginning now with the part on verbs. This week she will be working on the section  
 on the tense system. [...]’
- b. Sinds de oerknal breidt het heelal zich in alle richtingen uit en  
 since the Big Bang expands the universe REFL in all directions prt. and  
 waarschijnlijk zal dat voortduren tot het einde der tijden.  
 probably will that continue until the end the<sub>gen</sub> times  
 ‘Since the Big Bang the universe is expanding in all directions and probably that will continue  
 until the end of times.’

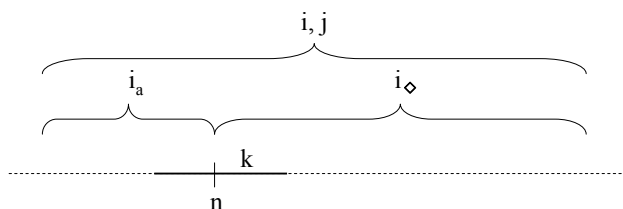


Figure 2: Simple present (Ik wandel ‘I am walking’)

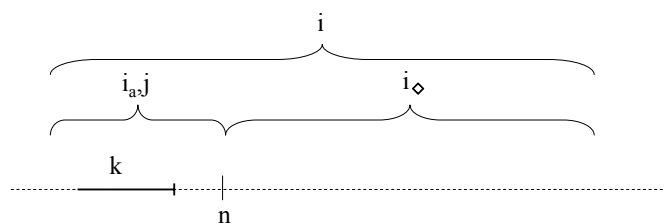


Figure 3: Present perfect (Ik heb gewandeld 'I have walked')

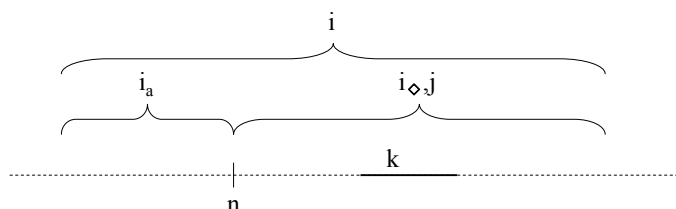


Figure 4: Future (Ik zal wandelen 'I will walk')

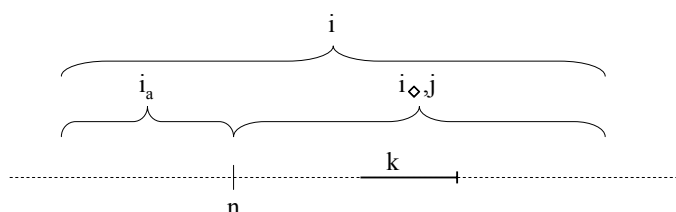
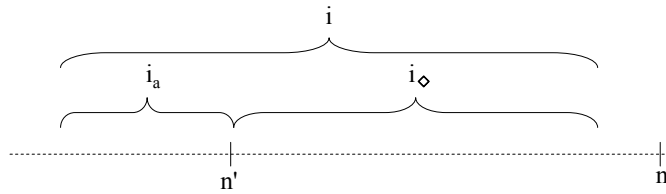


Figure 5: Future perfect (Ik zal hebben gewandeld 'I will have walked')

- (4) a. Het ijs zal vanavond smelten.  
the ice will tonight melt  
'The ice will melt tonight.'
- b. Het ijs zal vanavond gesmolten zijn.  
the ice will tonight melted be  
'The ice will have melted tonight.'
- (5) a. Jan zal vanavond een brief schrijven.  
Jan will tonight a letter write  
'Jan will write a letter tonight.'
- b. Jan zal vanavond een brief geschreven hebben.  
Jan will tonight a letter written have  
'Jan will have written a letter tonight.'
- (6) a. We zijn thuis.  
we are at.home
- b. We zijn vandaag thuis.  
we are today at.home
- c. We zijn morgen thuis.  
we are tomorrow at.home
- d. We zijn vandaag thuis en morgen in Utrecht.  
we are today at.home and tomorrow in Utrecht

## 1.2 The past tenses

Figure 6: The past tense interval  $i$ 

- (7) a. Els werkte vorige week aan de paragraaf over het temporele systeem. [past]  
 Els worked last week on the section about the tense system  
 ‘Last week, Els was writing the section on the tense system.’
- b. Op maandag had ze de algemene opbouw vastgesteld. [past perfect]  
 on Monday had she the overall organization prt.-determined  
 ‘Yesterday, she had determined the overall organization.’
- c. Op dinsdag schreef ze de inleiding. [past]  
 on Tuesday wrote she the introduction  
 ‘On Tuesday, she wrote the introduction.’
- d. Daarna zou ze de acht temporele vormen beschrijven. [future in past]  
 after.that would she the eight tense forms describe  
 ‘After that, she would describe the eight tense forms.’
- e. Ze dacht dat ze het zaterdag wel voltooid zou hebben. [future perfect in past]  
 she thought that she it Saturday PRT completed would have  
 ‘She assumed that she would have completed it on Saturday.’

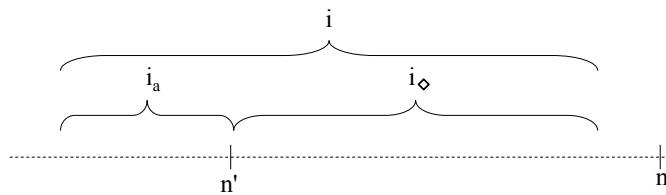
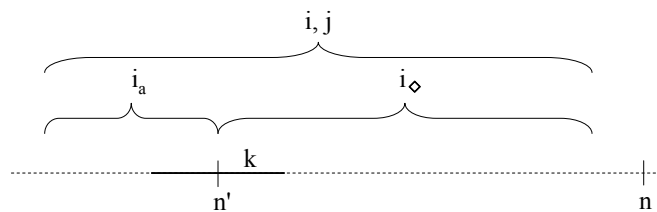
Figure 6: The past tense interval  $i$ 

Figure 7: Simple past (Ik wandelde ‘I was walking’)

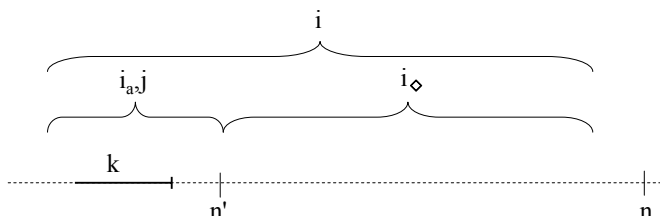


Figure 8: Past perfect (Ik had gewandeld ‘I had walked’)

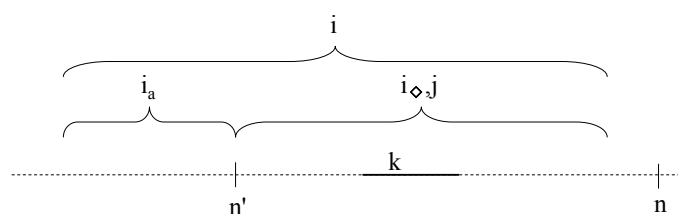


Figure 9: Future in the past (Ik zou wandelen 'I would walk')

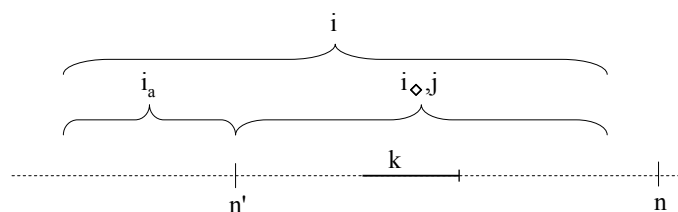


Figure 10: Future perfect in past (Ik zou hebben gewandeld 'I would have walked')

- (8) a. Het ijs zou vanavond smelten.  
the ice would tonight melt  
'The ice would melt tonight.'
- b. Het ijs zou vanavond gesmolten zijn.  
the ice will tonight melted be  
'The ice would have melted tonight.'
- (9) a. Jan zou gisteren een brief schrijven.  
Jan would yesterday a letter write  
'Jan would write a letter yesterday.'
- b. Jan zou gisteren een brief geschreven hebben.  
Jan would yesterday a letter written have  
'Jan would have written a letter yesterday.'

V. The placement of speech time  $n$  with respect to the past tense interval  $i$

- (10) The binary tense oppositions according to Verkuyl (2008):
- $[\pm\text{PAST}]$ : Present ( $i \circ n$ ) - Past ( $i < n$ )
  - $[\pm\text{POSTERIOR}]$ : Synchronous ( $j \cong i$ ) - Posterior ( $i < j$ )
  - $[\pm\text{PERFECT}]$ : Imperfect ( $k \preceq j$ ) - Perfect ( $k \prec j$ )
- (11) a. Els zou gisteren wandelen. [past  $i$  precedes  $n$ ]  
Els would yesterday walk
- b. Els zou morgen wandelen. [past  $i$  includes  $n$ ]  
Els would tomorrow walk
- (12) a. Jan zou gisteren een brief geschreven hebben. [past  $i$  precedes  $n$ ]  
Jan would yesterday a letter written have  
'Jan would have written a letter yesterday.'
- b. Jan zou morgen een brief geschreven hebben. [past  $i$  includes  $n$ ]  
Jan would tomorrow a letter written have  
'Jan would have written a letter tomorrow.'
- (13) The binary tense oppositions (revised):
- $[\pm\text{PAST}]$ : Present ( $i \circ n$ ) - Past ( $i \circ n'$ ), where  $n' < n$ .
  - $[\pm\text{POSTERIOR}]$ : Synchronous ( $j \cong i$ ) - Posterior ( $i < j$ )
  - $[\pm\text{PERFECT}]$ : Imperfect ( $k \preceq j$ ) - Perfect ( $k \prec j$ )

## 2 Modality

- (19) a. Jan moet schaatsen. [deontic readings]  
 Jan must skate
- b. (i) Dispositional: Jan definitely wants to skate.  
 (ii) Directed deontic: Jan has the obligation to skate.  
 (iii) Non-directed deontic: It is required that Jan skates.  
 (iv) Probability: It must be the case that Jan skates.
- (20) a. Jan heeft gisteren moeten schaatsen. [deontic readings]  
 Jan has yesterday must skate
- b. Jan moet gisteren hebben geschaatst. [probability reading]  
 Jan must yesterday have skated

### 2.1 Epistemic modal verbs

- (21) a. Dat huis stort in.  
 that house collapses prt.  
 ‘It is the case that that house collapses’
- b. Dat huis moet instorten.  
 that house has.to prt.-collapse  
 ‘It must be the case that that house will collapse.’
- c. Dat huis kan instorten.  
 that house may prt.-collapse  
 ‘It may be the case that that house will collapse.’
- (22) a. Dat huis moest (wel) instorten.  
 that house had.to PRT prt.-collapse  
 ‘It had to be the case that that house would collapse.’
- b. Dat huis kon (elk moment) instorten.  
 that house might any moment prt.-collapse  
 ‘It might have been the case that that house would collapse any moment.’
- (24) Mijn huis moet deze week instorten. Misschien is het zelfs al gebeurd  
 my house has.to this week prt.-collapse maybe has it even already happened  
 ‘It must be the case that my house will collapse this week. Maybe it even happened already’

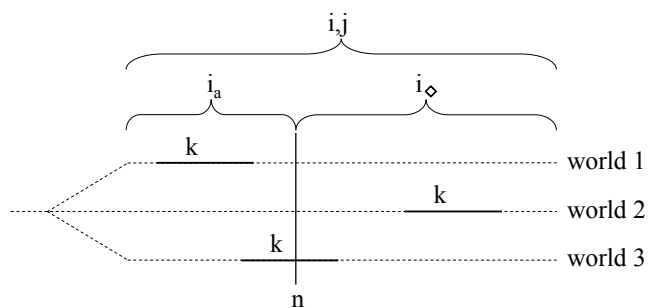


Figure 15: Epistemic modality and present tense (revised)

### 2.2 The verb *zullen* ‘will’: future auxiliary or epistemic modal?

- (29) a. Zij zal dat boek morgen versturen. [temporal: future]  
 she will that book tomorrow send  
 ‘She will send that book tomorrow.’
- b. Zij zal dat boek wel versturen. [modal: probability reading]  
 she will that book PRT send  
 ‘It will probably be the case that she will send that book.’

*I. The verb zullen is not homonymous*

- (30) a. Zij zal dat boek morgen versturen ...  
 she will that book tomorrow send  
 (maar je weet het natuurlijk nooit echt zeker bij haar).  
 but you know it of course never really certain with her  
 ‘She will send that book tomorrow (although one never knows for sure of course with her).’  
 b. Zij zal dat boek wel versturen (maar je weet het natuurlijk nooit echt zeker).  
 she will that book PRT send but you know it of course never really certain  
 ‘It will probably be the case that she will send that book (although one never knows for sure).’
- (31) Zij stuurt dat boek wel.  
 she sends that book prt  
 ‘It will very likely be the case that she will send the book.’
- (32) a. Zij zal dat boek morgen zeker/misschien sturen.  
 she will that book today certainly/maybe send  
 ‘It will certainly/maybe be the case that she will send that book tomorrow.’  
 b. Zij zal dat boek zeker/misschien wel sturen.  
 she will that book certainly/maybe prt send  
 ‘It will certainly/maybe be the case that she will send the book.’
- (33) a. Zij zal dat boek morgen hebben verstuurd.  
 she will that book tomorrow have sent  
 ‘She will have sent that book tomorrow.’  
 a’. \*Zij heeft dat boek morgen zullen sturen.  
 she has that book tomorrow will sent  
 b. Zij zal het boek wel verstuurd hebben  
 she will the book probably sent have  
 ‘She will probably have sent the book.’  
 b’. \*Zij heeft het boek wel zullen versturen.  
 she has the book probably will send

*II. The verb zullen is not a future auxiliary*

- (34) Mijn huis zal deze week instorten. Misschien is het al gebeurd  
 my house will this week prt.-collapse maybe is it already happened  
 ‘My house will collapse this week. Maybe it has already happened.’
- (35) a. Dit huis zal deze week instorten.  
 this house will this week prt.-collapse  
 ‘That house will collapse this week.’  
 b. Dit huis is deze week ingestort.  
 this house has this week prt.-collapse  
 ‘This house has collapsed this week.’

### 3 The Dutch verbal tense system

- (58) a. [±PAST]: Present ( $i \circ n$ ) - Past ( $i \circ n'$ ), where  $n' < n$ .  
 b. [±POSTERIOR]: Synchronous ( $j \cong i$ ) - Posterior ( $i < j$ )  
 c. [±PERFECT]: Imperfect ( $k \leq j$ ) - Perfect ( $k < j$ )

Table 3: The Dutch verbal tense system (revised)

	PRESENT	PAST
IMPERFECT	simple present <i>Ik wandel/Ik zal wandelen</i> I walk/I will walk/I will walk	simple past <i>Ik wandelde/Ik zou wandelen</i> I walked/ I would walk
PERFECT	present perfect <i>Ik heb gewandeld/</i> <i>Ik zal hebben gewandeld</i> I have walked/I will have walked	past perfect <i>Ik had gewandeld/</i> <i>Ik zou hebben gewandeld</i> I had walked/I would have walked

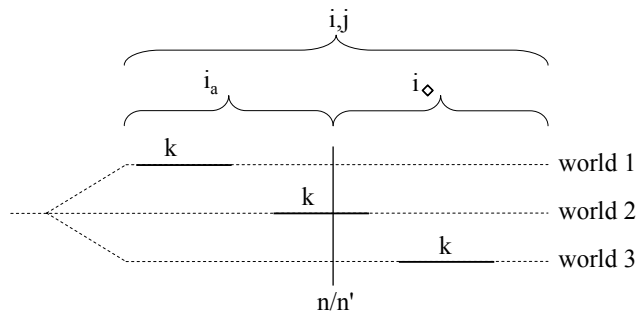


Figure 16: Simple tenses in Dutch

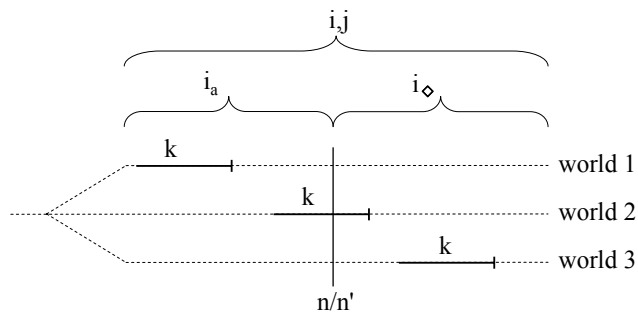


Figure 17: Perfect tenses in Dutch

### 3.1 The uses of the simple tenses

- (59) a. temporal information (binary tense theory)  
 b. modal information (theory of possible worlds)  
 c. pragmatic information (Grice's maxim of quantity)

#### I. Default use

- (60) Els leest vandaag mijn artikel.  
 Els reads today my paper  
 'Els is reading my paper today.'



## II. Non-linguistic context

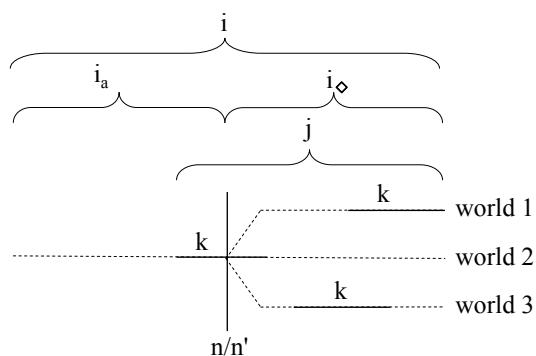


Figure 18: Simple tenses in Dutch (split-off point possible worlds =  $n/n'$ )

## III. Adverbial modification

- (61) a. Els leest vanmorgen mijn artikel.  
Els reads this morning my paper  
'Els is reading my paper this morning.'
- b. Els leest op dit moment mijn artikel.  
Els reads at this moment my paper  
'Els is reading my paper at this moment.'
- c. Els leest vanmiddag mijn artikel.  
Els reads this afternoon my paper  
'Els is reading my paper this afternoon.'

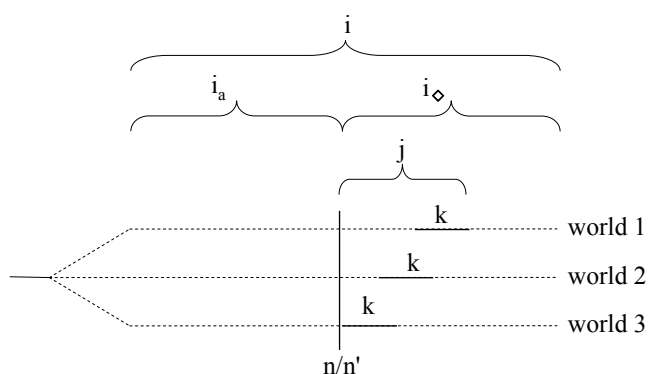


Figure 19: Simple tenses in Dutch (adverbial modification);  $j$  = this afternoon

## IV. Multiple events

- (64) a. Ik eet vandaag drie keer: vanochtend, vanmiddag en vanavond.  
I eat today three time this.morning this.afternoon and tonight  
'I will eat three times today: this morning, this afternoon and tonight.'
- b. Ik ga vaak naar de bioscoop.  
I go often to the cinema  
'I often go to the cinema.'

### V. Habitual and generic clauses

- (66) a. Jan gaat (altijd) met de bus naar zijn werk.  
 Jan goes always with the bus to his work  
 ‘Jan (always) goes to his work by bus.’  
 b. Jan rookt.  
 Jan smokes  
 ‘Jan smokes/is a smoker.’
- (67) a. Een echte heer is hoffelijk.  
 a true gent is courteous  
 b. Echte heren zijn hoffelijk.  
 true gents are courteous  
 c. De walvis is een zoogdier.  
 the whale is a mammal

### VI. Conditionals and hypotheticals

Present tense examples like (68) allow for at least two readings, which we may refer to as

- (68) Als ik genoeg geld heb, ga ik op vakantie.  
 when/if I enough money have go I on holiday  
 ‘When/If I have enough money, I go on holiday.’
- (69) a. Als ik genoeg geld heb, ga ik altijd op vakantie. [conditional]  
 when I enough money have go I always on holiday  
 ‘Whenever I have enough money, I go on holiday.’  
 b. Als ik volgend jaar genoeg geld heb, ga ik op vakantie. [hypothetical]  
 if I next year enough money have go I on holiday  
 ‘If I have enough money next year, I will go on holiday.’
- (70) a. Als je waterstof en zuurstof verbindt, krijg je water.  
 if one hydrogen and oxygen merge get one water  
 ‘If one merges hydrogen and oxygen, one gets water.’  
 b. Als je waterstof en zuurstof verbindt, krijg je altijd water.  
 if one hydrogen and oxygen merge get one always water  
 ‘If one merges hydrogen and oxygen, one always gets water.’  
 c. #Als je morgen waterstof en zuurstof verbindt, krijg je water.  
 when one tomorrow hydrogen and oxygen merge get one water  
 ‘If one merges hydrogen and oxygen tomorrow, one gets water.’

### VII. Conditionals and counterfactuals

- (71) a. Als ik genoeg geld had, ging ik op vakantie.  
 when I enough money had went I on holiday  
 ‘When/If I had enough money, I went/would go on holiday.’  
 b. Als ik jou was, ging ik op vakantie.  
 when I you were went I on holiday  
 ‘If I were you, I would go on holiday.’
- (72) a. Toen ik genoeg geld had, ging ik op vakantie.  
 at.the.time I enough money had went I on holiday  
 ‘At the time that I had enough money, I went on holiday.’  
 b. Zodra ik genoeg geld heb, ga ik op vakantie.  
 as.soon.as I enough money have go I on holiday  
 ‘As soon as I have enough money, I will go on holiday.’