

# Zeroes in derivational morphology

## The case of conversion

Guido Vanden Wyngaerd

KU Leuven (Brussels)

Connecting Roots and Affixes (CRAFF)

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# Outline

Introduction

Polycategorical suffixes

Polycategorical suffixes in NS

Root-imposed categorial restrictions

Conclusion

## Introduction

Polycategorical suffixes

Polycategorical suffixes in NS

Root-imposed categorial restrictions

Conclusion

V-N

love  
salute  
form  
chair  
floor  
rust  
dance  
kiss  
run  
walk  
feed  
show  
kick

V-A

cool  
narrow  
thin  
dry  
clear  
empty  
clean  
warm  
open  
tame  
blind  
dim  
slim

A-N

secret  
white  
complex  
evil

V-A-N

average  
brown  
quiet

(1)

a.

N  
|  
quiet

b.

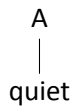
A  
|  
quiet

c.

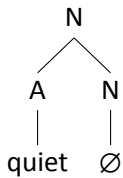
V  
|  
quiet

(2)

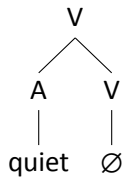
a.



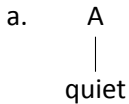
b.



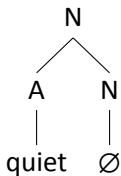
c.



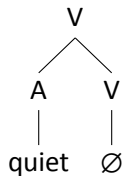
(2)



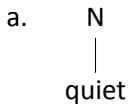
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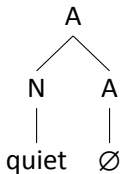
c.



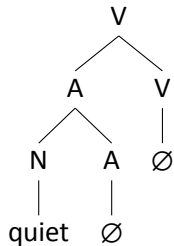
(3)



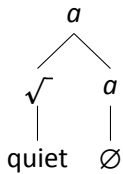
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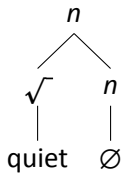
c.



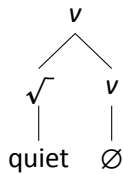
(4) a.



b.



c.





## Borer's Generalisation (Borer 2014: 11)

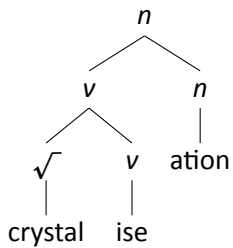
Categorially marked forms in English may not undergo a (phonologically) unmarked noun-verb alternation.

- (5)      a.    a salutation  
          an arrival  
          a neighbourhood  
          a writer  
          the kindness  
          the ability
- b.    \*to salutation  
              \*to arrival  
              \*to neighbourhood  
              \*to writer  
              \*to kindness  
              \*to ability

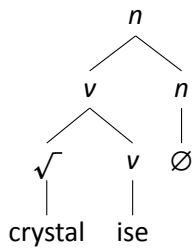
- (6)      a.    \*a crystallise  
          \*an instantiate  
          \*an acidify  
          \*an encase  
          \*a fatten  
          \*an enlighten
- b.    to crystallise  
              to instantiate  
              to acidify  
              to encase  
              to fatten  
              to enlighten

(7)

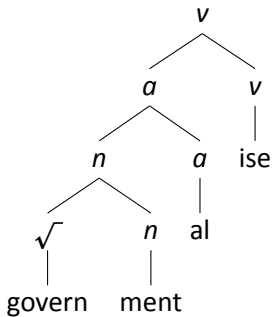
a.



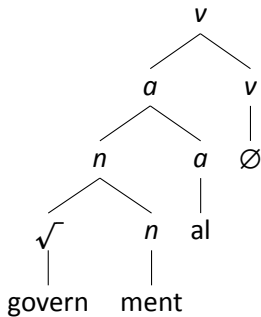
b.



(8) a.



b.



## Borer's conclusion

There are no zero categorising heads.

# Conversion and acategorical roots: DM

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- ▶ Subset Principle
- ▶ the more syntactic environments, the less properties
- ▶ *quiet* can occur everywhere, hence it is an acategorical root, with zero syntactic properties

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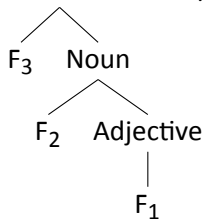
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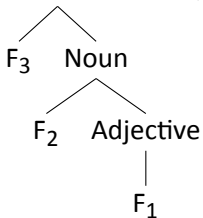
# Conversion and acategorical roots: Nanosyntax

- ▶ overspecification
- ▶ Superset Principle
- ▶ the more syntactic environments, the more properties
- ▶ *quiet* can occur everywhere: it has *all* the relevant syntactic properties, i.e. it is specified for *all* relevant features

(9) Verb  $\Leftrightarrow$  /quiet/



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(10) *The Superset Principle* (Starke 2009)

A lexically stored tree L matches a syntactic node S iff L contains the syntactic tree dominated by S as a subtree

# This talk

- ▶ to discuss some predictions of the NS approach to conversion for the case of polycategorial suffixes in English and Dutch



Introduction

## Polycategorical suffixes

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	NOUN	ADJECTIVE
-al	<i>arrival</i>	<i>logical</i>
-able	constable	endurable
-an	librarian	reptilian
-ant	defendant	defiant
-ary	functionary	legendary
-ate	consulate	intricate
-ible	crucible	credible
-ic	tunic	magic
-ive	incentive	auditive
-ory	promontory	rotatory
-ous	focus	mucous
-esque	arabesque	grotesque
-y	parsimony	airy
-ish	rubbish	foppish
-en	warden	golden
-ful	handful	colorful

	NOUN		ADJECTIVE	
-air	diamantair	'diamond dealer'	elementair	'elementary'
-oot	malloot	'scatterbrain'	idiot	'idiotic'
-(o)ide	asteroïde	'asteroid'	paranoïde	'paranoid'
-ieur	interieur	'interior'	inferieur	'inferior'
-aan	mohammedaan	'Muhammadan'	momentaan	'momentary'
-aat	kandidaat	'candidate'	accuraat	'accurate'
-ant	communicant	'communicant'	arrogant	'arrogant'
-ent	solvent	'solvent'	coherent	'coherent'
-é	exposé	'account'	privé	'private'
-iel	debiel	'imbecile'	fragiel	'fragile'
-iet	meteoriet	'meteorite'	erudiet	'erudite'
-oos	leproos	'leper'	mucoos	'mucous'
-t	product	'product'	abstract	'abstract'
-(e)ling	tweeling	'twins'	mondeling	'oral'
-el	aquarel	'aquarelle'	naturel	'natural'
-er	bakker	'baker'	Groninger	'from Groningen'
-eel	bureel	'office'	temporeel	'temporal'
-aal	admiraal	'admiral'	paradoxaal	'paradoxical'
-iek	motoriek	'locomotion'	sympathiek	'congenial'
-ief	collectief	'collective'	foutief	'wrong'
-oir	urinoir	'urinal'	notoir	'notorious'
-en	Zweden	'Sweden'	houten	'wooden'

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<b>-iek</b>	<b>motoriek</b>	<b>'locomotion'</b>	<b>sympathiek</b>	<b>'congenial'</b>
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-oir	urinoir	'urinal'	notoir	'notorious'
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(11) a. N  
|  
-iek

b. A  
|  
-iek

(12)

a.

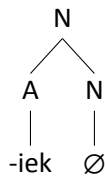
A  
|  
-iek

b.

N  
/ \  
A N  
| |  
-iek ∅

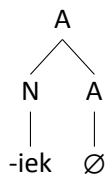
(12) a. A  
|  
-iek

b.



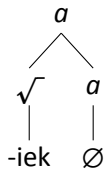
(13) a. N  
|  
-iek

b.

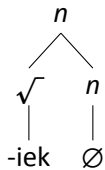


(14)

a.

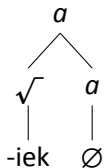


b.

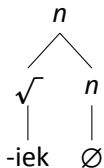




(14) a.

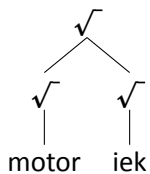


b.

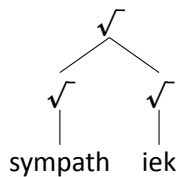


De Belder (2011); Lowenstamm (2014); Creemers, Don & Fenger (2018)

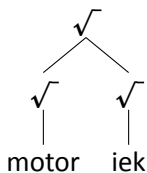
(15) a.



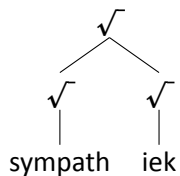
b.



(15) a.

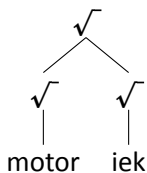


b.

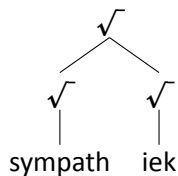


- (16) N **de motoriek**  
'the locomotion'  
A \*erg motoriek  
V \*ik motoriek

(15) a.



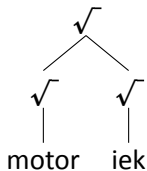
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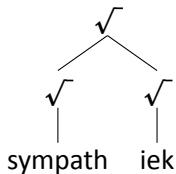
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'very congenial'

(15) a.



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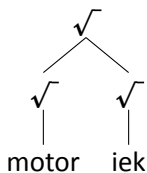
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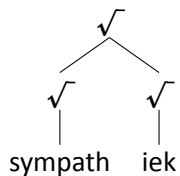
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V \*ik motoriek

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## Syncretic *-iek*

(17)

	NOUN	ADJECTIVE
politiek	'politics'	'political'
antiek	'antiques'	'antique'
katholiek	'catholic'	'catholic'
komiek	'comedian'	'comical'
fysiek	'physique'	'physical'
kritiek	'critique'	'critical'
generiek	'credits'	'generic'
excentriek	'eccentric'	'eccentric'
metriek	'metrics'	'metrical'
periodiek	'periodical'	'periodic'

## Adjectival *-iek*

(18)

authentiek	'authentic'	ludiek	'playful'
canoniek	'canonical'	organiek	'organic'
choleriek	'hot-tempered'	rembrandtiek	'rembrandtesque'
diplomatiek	'diplomatic'	satiriek	'satirical'
energiek	'energetic'	specifiek	'specific'
fanatiek	'fanatical'	sympathiek	'sympathetic'
flegmatiek	'phlegmatic'	tiranniek	'tyrannical'
kolderiek	'hare-brained'	uniek	'unique'



## Nominal *-iek*

(19)	akoestiek	'acoustics'	methodiek	'methodology'
	acrobatiek	'acrobatics'	<b>motoriek</b>	'motor system'
	atletiek	'athletics'	paniek	'panic'
	dialectiek	'dialectic(s)'	pedagogiek	'pedagogy'
	didactiek	'didactics'	polemiek	'polemic'
	dramatiek	'drama(tics)'	pragmatiek	'pragmatics'
	dynamiek	'dynamic'	retoriek	'rhetoric'
	erotiek	'eroticism'	reumatiek	'rheumatism'
	ethiek	'ethics'	semantiek	'semantics'
	fonetiek	'phonetics'	symboliek	'symbolism'
	gymnastiek	'gymnastics'	systematiek	'system(atics)'
	lyriek	'poetry'	techniek	'technique'

## Syncretic *-al*

(20)	chemical	commercial	intellectual	visual
	adverbial	conditional	manual	vocal
	collateral	decimal	millennial	universal
	aerial	dental	mineral	special
	animal	diagonal	musical	terminal
	annual	dual	nasal	traditional
	heterosexual	editorial	ordinal	casual
	ideal	epidural	original	instrumental
	centennial	extraterrestrial	palatal	cardinal
	bilingual	final	periodical	social
	capital	labial	potential	ritual
	spiritual	initial	international	principal
	formal	normal		

## Nominal and adjectival *-al*

(21) denial  
refusal  
accrual  
acquittal  
arrival  
arousal  
betrayal  
withdrawal

(22) logical  
agitational  
tonal  
dialectal  
governmental  
vaginal

# More syncretic suffixes I

-LY	-IC	-IVE	-ENT, ANT	-ARY	-IST
daily	agnostic	adhesive	adolescent	contemporary	feminist
weekly	cosmetic	fugitive	delinquent	primary	modernist
monthly	narcotic	demonstrative	innocent	documentary	expressionist
quarterly	antibiotic	sedative	equivalent	subsidiary	capitalist
	antiseptic	laxative	absorbent	revolutionary	centralist
	Catholic	contraceptive	solvent	preliminary	colonialist
	classic	native	present	mercenary	Darwinist
	polemic		constant		
			militant		
			itinerant		
			clairvoyant		
			deviant		
			Protestant		

## More syncretic suffixes II

	-ESE	-AN	-I/Y	-ISH
Czech	Chinese	Moroccan	Iraqi	Finnish
French	Portuguese	Italian	Israeli	Turkish
Greek	Lebanese	Algerian	Pakistani	Spanish
Slovak	Cantonese	Tuscan	Malagasy	Polish
Dutch	Congolese	Australian	Omani	Swedish
Welsh	Faroese	European	Danish	
	Madurese	German	English	

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  - ▶ some roots occur only in adjectives
  - ▶ some roots occur only in nouns
- ▶ these properties are unexpected if the relevant suffixes were roots

Introduction

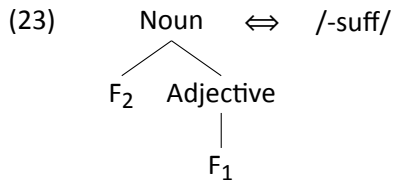
Polycategorical suffixes

**Polycategorical suffixes in NS**

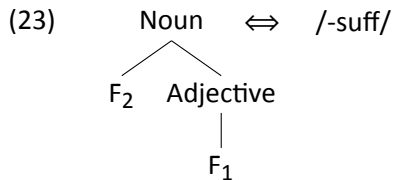
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## Polycategorical suffixes in NS

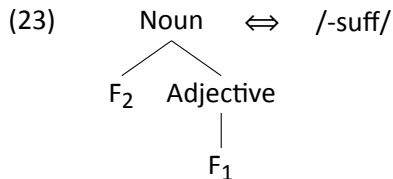


## Polycategorical suffixes in NS



- ▶ a suffix can assign multiple categories

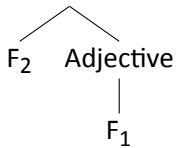
## Polycategorical suffixes in NS



- ▶ a suffix can assign multiple categories
- ▶ a suffix need not assign all categories (N, A, V)

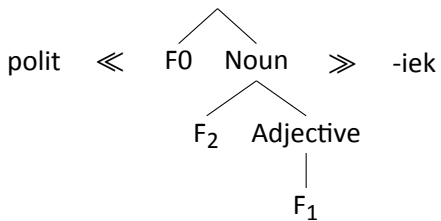


(24) Noun  $\Leftrightarrow$  /-iek/

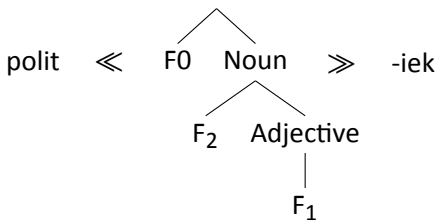




(26)

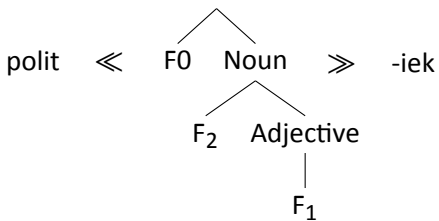


(26)



⇒ *-iek* can make nouns and adjectives

(26)



⇒ *-iek* can make nouns and adjectives

⇒ *-iek* cannot make verbs

(27)

	NOUN	ADJECTIVE
linguistique	'linguistics'	'linguistic'
sémantique	'semantics'	'semantic'
technique	'technique'	'technical'
clinique	'hospital'	'clinical'
gymnastique	'gymnastics'	'gymnastic'
acoustique	'acoustics'	'acoustic'
romantique		'romantic'

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(28)

NOUN		ADJECTIVE	
politiek	'politics'	politiek	'political'
akoestiek	'acoustics'		
		authentiek	'authentic'
		energiek	'energetic'
		fanatiek	'fanatical'



(28)

NOUN		ADJECTIVE	
politiek	'politics'	politiek	'political'
akoestiek	'acoustics'	akoestisch	'acoustic'
authentici[s]iteit	'authenticity'	authentiek	'authentic'
energie	'energy'	energiek	'energetic'
fanatisme	'fanaticism'	fanatiek	'fanatical'
fanaticus	'fanatic'		

(28)

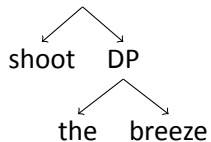
NOUN		ADJECTIVE	
politiek	'politics'	politiek	'political'
akoestiek	'acoustics'	akoestisch	'acoustic'
authentici[s]iteit	'authenticity'	authentiek	'authentic'
energie	'energy'	energiek	'energetic'
fanatisme	'fanaticism'	fanatiek	'fanatical'
fanaticus	'fanatic'		

## A double challenge

- ▶ get the right root to combine with the right suffix
- ▶ get the category right with syncretic suffixes (noun, adjective, or both)

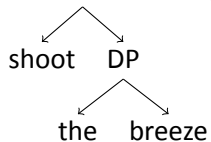
## Pointers (Starke 2014)

(29) VP  $\Leftrightarrow$  /-/, [CHAT]



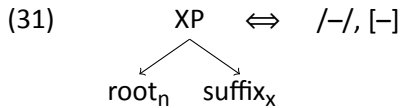
# Pointers (Starke 2014)

(29) VP  $\Leftrightarrow$  /-/, [CHAT]

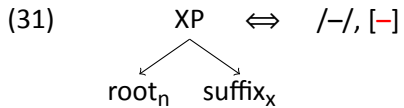


(30)      CMPRP     $\Leftrightarrow$     /worse/, [-]  
              /        \  
              bad    CMPR

(30)      CMPRP     $\Leftrightarrow$     /worse/, [-]  
              ↙      ↘  
              bad    CMPR







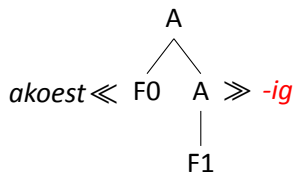
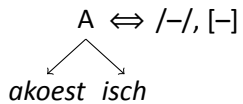
## Closing the door (and opening a loophole)

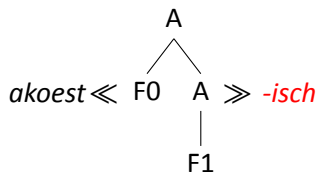
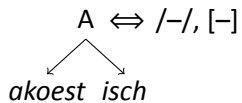
- ▶ the suffixes at issue here come from the nonnative, unproductive stratum of Dutch and English morphology
- ▶ these suffixes are not directly accessible to the spellout algorithm
- ▶ they are only indirectly accessible, through pointers

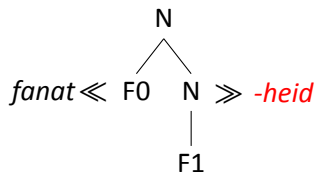
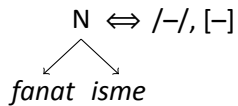
(M. Starke, class lectures, 2019)

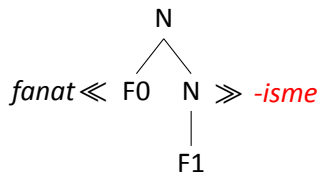
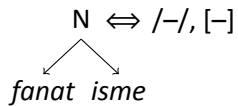
(32)

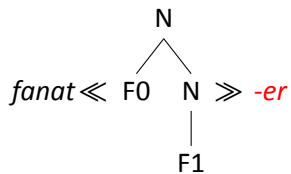
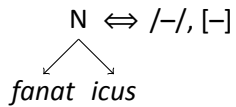
	NONNATIVE	NATIVE
N	-iteit	-heid
	-isme	
	-ie	
	-ist	-er
	-icus	
A	-isch	-ig



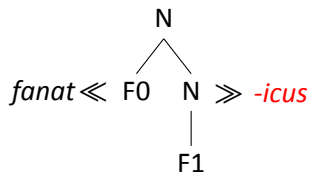
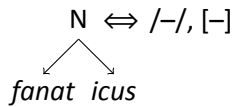




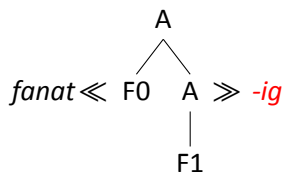
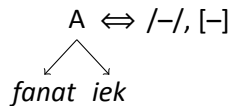




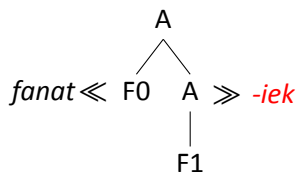
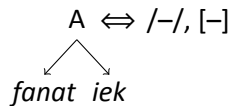




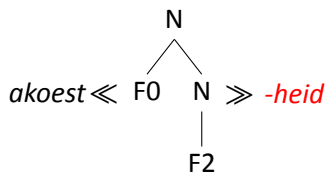
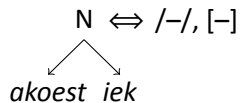
## Adjectival *-iek*



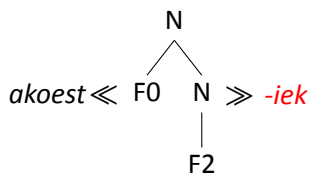
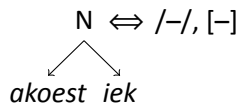
# Adjectival *-iek*



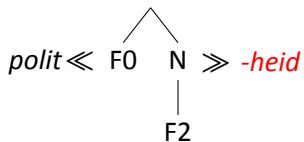
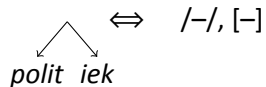
## Nominal *-iek*



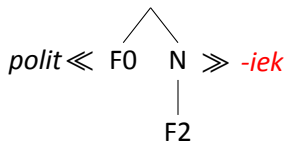
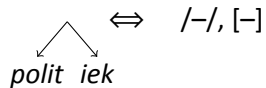
## Nominal *-iek*



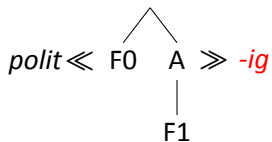
# Syncretic *-iek*



# Syncretic *-iek*

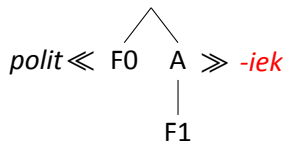
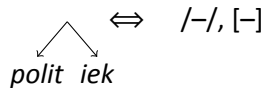


# Syncretic *-iek*





# Syncretic *-iek*



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# Conclusion

- ▶ Conversion can be explained (without recourse to zero elements) by means of nanosyntactic phrasal spellout, and Superset Principle logic
- ▶ Polycategorial suffixes in English and Dutch show a behaviour that agrees well with the predictions of the model
- ▶ Selection restrictions and root-imposed categorial restrictions can be accounted for by means of pointers

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