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Comprehension and production of verbs in aphasic speakers

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APPENDIX I

AAT-classification and classification by clinical judgement of all patients

From the 76 patients that were tested with (a part of) the VECTA, 15 Broca's aphasics and 19 anomics were included in the present study. The AAT-classification and the classification by clinical judgement were similar in these patients. All other patients were not included: 10 patients were not classified by the AAT, 12 patients received similar classifications but were not included for other reasons, 20 patients did not get similar classifications. Below, the classifications of the latter 32 patients are presented.

similar classification, not included:

	AAT	Clinical judgement
B16:	Broca	Broca *
B17:	Broca	Broca **
B18:	Broca	Broca **
B19:	Broca	Broca ***
B20:	Broca	Broca ****
A20:	aphasic?/anomic	anomic *****
A21:	aphasic?/anomic	anomic *****
W1:	Wernicke	Wernicke
W2:	Wernicke	Wernicke
W3:	Wernicke	Wernicke
M1:	mixed	mixed
M2:	mixed	mixed

*: after administration of the VECTA the speech therapist tested this patient again with the AAT and at this time he was diagnosed as anomic

** : only tested with a part of the VECTA

*** : excluded because this patient suffers from Multiple Sclerosis. This could have confounded the data of this patient

**** : excluded because this patient had suffered from a gastrointestinal bleeding between the first and the second session of the VECTA

*****: not included because the AAT computer programme reported that it was uncertain if the patient was aphasic or not

no similar classification, not included:

	AAT	Clinical judgement
U1:	Broca	mixed
U2:	Broca	anomic
U3:	Broca apraxia/Broca?	o n l y v e r b a l
U4:	Broca	global
U5:	Broca	Broca?
U6:	Broca	Broca?
U7:	anomic	conduction aphasia
U8:	anomic	only verbal apraxia
U9:	anomic	aphasic?
U10:	anomic	anomic?
U11:	anomic	conduction aphasic
U12:	aphasic?/ anomic	mixed
U13:	Wernicke	mixed
U14:	Wernicke	anomic
U15:	Wernicke	global
U16:	Wernicke	anomic
U17:	Wernicke	global
U18:	Wernicke	mixed?
U19:	Wernicke	anomic
U20:	Wernicke	global

APPENDIX II

Overview of the items in the subtests of the VECTA

An overview of the items that were used in the different tests is presented in this appendix. The overview starts by listing the sixty verbs that were used in action naming and the nouns that belong to these verbs. These nouns were tested in object naming. Subsequently, the items in all subtests will be provided. First the testitems are given in Dutch, afterwards the translated version follows.

doelwerkwoorden benoemen acties en bijbehorende objecten

1. worstelen	vuist	31. snijden	mes
2. zeven	zeef	32. fietsen	fiets
3. fluiten	fluit	33. turnen	balk
4. bakken	koekepan	34. dalen	berg
5. vijlen	vijl	35. fotograferen	fototoestel
6. gooien	bal	36. vlechten	haarspeld
7. naaien	naald	37. stuiteren	stoep
8. hakken	bijl	38. biljarten	keu
9. poetsen	doekje	39. springen	been
10. ploegen	ploeg	40. baden	bad
11. plukken	bloem	41. badmintonnen	racket
12. krabben	nagel	42. stijgen	vliegtuig
13. niezen	zakdoek	43. vissen	hengel
14. wippen	wip	44. varen	boot
15. feliciteren	cadeau	45. masseren	duim
16. hoepelen	hoepel	46. sproeien	slang
17. verven	roller	47. bedelen	bedelaar
18. zeilen	zeilboot	48. lijmen	lijm
19. wringen	sok	49. vouwen	papier
20. toveren	tovenaar	50. schoffelen	schoffel
21. duiken	duikplank	51. tappen	tap
22. hockeyen	stick	52. bellen	bel
23. spitten	schop	53. melken	hond*
24. schaken	schaakbord	54. roeren	lepel
25. hurken	knie	55. dweilen	dweil
26. skiën	ski	56. schaven	schaaf
27. tollen	tol	57. zwaaien	trein
28. puzzelen	puzzel	58. dobbelen	dobbelsteen
29. timmeren	hamer	59. sleeën	slee
30. kammen	kam	60. zagen	zaag

* object hoort bij *aaien* (= afleider bij melken), opgenomen in verband met matching op frequentie

Auditief Woordbegrip

<i>doelwoord</i>	<i>afleider</i>	<i>noun</i>	<i>noun-afleider</i>
1. behangen	verven	kwast	roller
2. maaien	spitten	zeis	schop
3. raspen	schaven	rasp	schaaf
4. sjoelen	dobbelen	sjoelblok	dobbelsteen
5. stempelen	lijmen	stempel	lijm
6. knielen	bedelen	rok	bedelaar
7. koppen	stuiteren	lat	stoep
8. harken	schoffelen	hark	schoffel
9. toeteren	fluiten	toeter	fluit
10. pompen	tappen	pomp	tap
11. klimmen	dalen	boom	berg
12. vliegeren	hoepelen	vlieger	hoepel
13. kneden	wringen	deeg	sok
14. groeten	feliciteren	hoed	cadeau
15. boren	zagen	boor	zaag
16. bukken	hurken	rug	knie
17. vegen	poetsen	bezem	doekje
18. tafeltennissen	badmintonnen	batje	racket
19. prikken	roeren	lepel	vork
20. strikken	vlechten	veter	haarspeld
21. gapen	niezen	kussen	zakdoek
22. zwabberen	dweilen	zwabber	dweil
23. zwemmen	duiken	strand	duikplank
24. rollen	ploegen	rol	ploeg
25. roeien	zeilen	roeispaan	zeilboot
26. tennissen	biljarten	racket	keu
27. stappen	fietsen	step	fiets
28. douchen	baden	douche	bad
29. knijpen	masseren	vinger	duim
30. kaarten	puzzelen	kaart	puzzel

<i>doelwoord</i>	<i>afleider</i>	<i>noun</i>	<i>noun-afleider</i>
31. rolschaatsen	sleeën	rolschaats	slee
32. schaatsen	skiën	schaats	ski
33. vangen	gooien	bal	stok
34. aaien	melken	hond	koe
35. landen	stijgen	vliegtuig	luchtballon
36. knippen	naaien	schaar	naald
37. föhnen	vijlen	föhn	vijl
38. zinken	varen	boot	motor
39. juichen	zwaaien	vlag	trein
40. goochelen	toveren	goochelaar	tovenaar
41. schillen	snijden	appel	mes
42. blussen	sproeien	slang	kraan
43. hinkelen	turnen	krijtje	balk
44. trommelen	bellen	trommel	bel
45. malen	hakken	koffiemolen	bijl
46. zaaien	plukken	zaad	bloem
47. filmen	fotograferen	camera	fototoestel
48. schermen	hockeyen	degen	stick
49. persen	zeven	pers	zeef
50. metselen	timmeren	hamer	spijker
51. koken	bakken	fornuis	koekepan
52. kruipen	springen	baby	been
53. knikkeren	tollen	knikker	tol
54. boksen	worstelen	bokshandschoen	vuist
55. kamperen	vissen	tent	hengel
56. dammen	schaken	damsteen	schaakbord
57. scheuren	vouwen	krant	papier
58. schommelen	wippen	schommel	wip
59. borstelen	kammen	borstel	kam
60. bijten	krabben	gebit	nagel

Auditief zinsbegrip

doelzin

1. de jongen hurkt op de grond
2. de man hakt het hout
3. het kind baadt in de badkamer
4. de vrouw vijlt de nagels
5. de vrouw poetst de kandelaar
6. de man ploegt de grond
7. de man hockeyt op het sportveld
8. de man stijgt van de grond
9. de mannen worstelen in de sporthal
10. de man bakt het eten
11. de vrouw masseert de man
12. de man daalt de berg af
13. de man schaakt aan de tafel
14. de vrouw naait de stof
15. het meisje fietst op de straat
16. de man verft de muur
17. de jongen dobbelt in de kamer
18. het kind fluit voor zijn moeder
19. de man vaart in het water
20. de man spit de tuin
21. de man schoffelt de tuin
22. de man feliciteert de vrouw
23. het meisje vlecht het haar
24. de man snijdt de ui
25. het meisje turnt op één been
26. de man tovert met een stokje
27. de jongen niest in de zakdoek
28. de mannen puzzelen aan de tafel
29. de vrouw zeeft het meel
30. de man skit de berg af

afleider

- bukken
- malen
- douchen
- föhnen
- vegen
- rollen
- schermen
- landen
- boksen
- koken
- knijpen
- klimmen
- dammen
- knippen
- steppen
- behangen
- sjoelen
- toeteren
- zinken
- maaien
- harken
- groeten
- strikken
- schillen
- hinkelen
- goochelen
- gapen
- kaarten
- persen
- schaatsen

doelzin

31. de jongen springt over de kuil
32. de man fotografeert in de tuin
33. de man stuitert de bal
34. de jongen vist in het kanaal
35. de jongen lijmt de kan
36. de jongen sleet van de heuvel
37. het meisje hoepelt op het veld
38. de vrouw wringt de handdoek
39. de man sproeit de tuin
40. de man melkt de koe
41. de man zaagt een plank
42. de jongen zwaait naar zijn moeder
43. de man biljart in het café
44. het meisje kamt het haar
45. het kind tolt op het schoolplein
46. de man tapt het bier
47. de kinderen wippen in de speeltuin
48. het meisje duikt in het water
49. de man schaaft de kast
50. de jongen belt met één hand
51. de man timmert een kast
52. de jongen gooit de bal
53. de man zeilt op het water
54. de vrouw roert het eten
55. de jongen krabt het meisje
56. de man plukt een bloem
57. de jongen badmintont op de camping
58. de man bedelt op de grond
59. de vrouw dweilt de vloer
60. de man vouwt het papier

afleider

- kruipen
- filmen
- koppen
- kamperen
- stempelen
- rolschaatsen
- vliegeren
- kneden
- blussen
- aaïen
- boren
- juichen
- tennisen
- borstelen
- knikkeren
- pompen
- schommelen
- zwemmen
- raspen
- trommelen
- metselen
- vangen
- roeien
- prikken
- bijten
- zaaien
- tafeltennisen
- knielen
- zwabberen
- scheuren

Benoemen acties

1. worstelen
2. zeven
3. fluiten
4. bakken
5. vijlen
6. gooien
7. naaien
8. hakken
9. poetsen
10. ploegen
11. plukken
12. krabben
13. niezen
14. wippen
15. feliciteren
16. hoepelen
17. verven
18. zeilen
19. wringen
20. toveren
21. duiken
22. hockeyen
23. spitten
24. schaken
25. hurken
26. skiën
27. tollen
28. puzzelen
29. timmeren
30. kammen
31. snijden
32. fietsen
33. turnen
34. dalen
35. fotograferen
36. vlechten
37. stuiteren
38. biljarten
39. springen
40. baden
41. badmintonnen
42. stijgen
43. vissen
44. varen
45. masseren
46. sproeien
47. bedelen
48. lijmen
49. vouwen
50. schoffelen
51. tappen
52. bellen
53. melken
54. roeren
55. dweilen
56. schaven
57. zwaaien
58. dobbelen
59. sleeën
60. zagen

Zinnen maken

1. klimmen
2. schaatsen
3. knielen
4. schommelen
5. vegen
6. metselen
7. zinken
8. knijpen
9. zwabberen
10. rollen
11. toeteren
12. knikkeren
13. steppen
14. schillen
15. landen
16. tafeltennissen
17. pompen
18. behangen
19. sjoelen
20. zaaien
21. prikken
22. kaarten
23. borstelen
24. boren
25. kruipen
26. maaïen
27. stempelen
28. goochelen
29. vliegeren
30. rolschaatsen
31. malen
32. vangen
33. bukken
34. aaien
35. koken
36. trommelen
37. föhnen
38. dammen
39. bijten
40. schermen
41. gapen
42. harken
43. groeten
44. raspen
45. kneden
46. koppen
47. juichen
48. persen
49. scheuren
50. hinkelen
51. boksen
52. roeien
53. filmen
54. tennissen
55. knippen
56. kamperen
57. douchen
58. zwemmen
59. blussen
60. strikken

Benoemen objecten

- | | |
|---------------------|-----------------|
| 1. roller | 31. fluit |
| 2. slang | 32. zeef |
| 3. hengel | 33. schaaf |
| 4. zeilboot | 34. berg |
| 5. been | 35. bal |
| 6. vijl | 36. bad |
| 7. naald | 37. doekje |
| 8. koekepan | 38. trein |
| 9. balk | 39. zaag |
| 10. bijl | 40. hamer |
| 11. knie | 41. mes |
| 12. lijm | 42. ski |
| 13. keu | 43. ploeg |
| 14. puzzel | 44. dweil |
| 15. sok | 45. papier |
| 16. hond | 46. tap |
| 17. schaakbord | 47. dobbelsteen |
| 18. vliegtuig | 48. zakdoek |
| 19. wip | 49. tol |
| 20. bedelaar | 50. duikplank |
| 21. bel | 51. slee |
| 22. hoepel | 52. fiets |
| 23. vuist | 53. stick |
| 24. boot | 54. nagel |
| 25. bloem | 55. schop |
| 26. stoep | 56. racket |
| 27. cadeau/pakje | 57. fototoestel |
| 28. lepel | 58. schoffel |
| 29. haarspeld/-knip | 59. kam |
| 30. tovenaer | 60. duim |

target verbs in action naming and the corresponding objects

1. wrestling	fist	31. cutting	knife
2. sieving	sieve	32. cycling	bicycle
3. playing the flute	flute	33. doing gymnastics	beam
4. frying	frying pan	34. descending	mountain
5. filing	file	35. photographing	camera
6. throwing	ball	36. braiding	hairpin/-clip
7. sewing	needle	37. bouncing	pavement
8. chopping	axe	38. playing billiards	cue
9. polishing	cloth	39. leaping	leg
10. ploughing	plough	40. taking a bath	bath
11. picking	flower	41. playing badminton	racket
12. scratching	nail	42. taking off	airplane
13. sneezing	handkerchief	43. fishing	fishing rod
14. seesawing	seesaw	44. navigating	boat
15. congratulating	present	45. massaging	thumb
16. rolling a hoop	hoop	46. watering	hose
17. painting	roller brush	47. begging	beggar
18. sailing	sailboat	48. gluing	glue
19. wringing	sock	49. folding	sheets
20. practising witchcraft	wizard	50. hoeing	hoe
21. diving	diving board	51. drawing beer	tap
22. playing hockey	(hockey)stick	52. ringing a bell	bell
23. digging	shovel	53. milking	dog *
24. playing chess	chessboard	54. stirring	spoon
25. squatting	knee	55. mopping	mop
26. skiing	ski	56. planing	plane
27. playing with a top	top	57. waving	train
28. doing a puzzle	jig saw puzzle	58. dicing	dice
29. hammering	hammer	59. sledging	sledge
30. combing	comb	60. sawing	saw

* object belongs to *to stroke* (= distractor of *to milk*), included in order to match for frequency

Verb comprehension

<i>target noun 2</i>	<i>distractor verb</i>	<i>distractor noun 1</i>	<i>distractor</i>
1. wallpapering	painting	brush	paint roller
2. mowing	digging	scythe	shovel
3. grating	planing	grater	plane
4. playing shuffleboard	dicing	shuffleboard	dice
5. stamping	gluing	stamp	glue
6. kneeling	begging	skirt	beggar
7. heading	bouncing	cross-bar	pavement
8. raking	hoeing	rake	hoe
9. squeezing a horn	playing flute	horn	flute
10. pumping	drawing	pump	tap
11. climbing	descending	tree	hill
12. flying a kite	rolling a hoop	kite	hoop
13. kneading	wringing	dough	sock
14. greeting	congratulating	hat	present
15. drilling	sawing	drill	saw
16. bending	squatting	back	knee
17. sweeping	cleaning	broom	cloth
18. playing tabletennis	playing badminton	bat	racket
19. poking	stirring	spoon	fork
20. tying	braiding	shoelace	hairpin
21. yawning	sneezing	pillow	handkerchief
22. swabbing	mopping	swab	mop
23. swimming	diving	beach	diving board
24. rolling	ploughing	roll	plough
25. rowing	sailing	oar	sailboat
26. playing tennis	playing billiards	racket	cue
27. scootering	cycling	scooter	bike
28. showering	taking a bath	shower	bath
29. pinching	massaging	finger	thumb
30. playing cards	doing a puzzle	card	jig saw puzzle

<i>target noun 2</i>	<i>distractor verb</i>	<i>distractor noun 1</i>	<i>distractor</i>
31. roller-skating	sledging	roller-skate	sleigh
32. skating	skiing	ice-skate	ski
33. catching	throwing	ball	stick
34. patting	milking	dog	cow
35. landing	taking off	airplane	balloon
36. cutting	sewing	scissors	needle
37. blow drying	filing	hairdrier	filer
38. sinking	navigating	boat	engine
39. cheering	waving	flag	train
40. doing magic	witchcrafting	magician	wizard
41. peeling	cutting	apple	knife
42. extinguishing	watering	hose	tap
43. hopping	doing gymnastics	chalk	beam
44. drumming	ringing a bell	drum	bell
45. grinding	chopping	grinder	axe
46. sowing	picking	seed	flower
47. filming	photographing	videocamera	camera
48. fencing	playing hockey	foil	stick
49. squeezing	sieving	presser	sieve
50. bricklaying	hammering	hammer	nail
51. boiling	frying	stove	frying pan
52. crawling	jumping	baby	leg
53. playing marbles	playing with a top	marble	top
54. boxing	wrestling	boxing glove	fist
55. camping	fishing	tent	fishing rod
56. playing at draughts	playing chess	draughtsman	chess board
57. tearing	folding	paper	sheets
58. swinging	seesawing	swing	seesaw
59. brushing	combing	brush	comb
60. biting	scratching	teeth	nail

Sentence comprehension

target sentence

1. the boy squats on the floor
2. the man cuts the wood
3. the child takes a bath
4. the woman files her nails
5. the woman polishes the candleholder
6. the man ploughs the land
7. the man plays hockey on the field
8. the man takes off
9. the men wrestle in the room
10. the man fries the food
11. the woman massages the man
12. the man descends the mountain
13. the man plays chess on the table
14. the woman sews the piece of cloth
15. the girl cycles on the street
16. the man paints the wall
17. the boy dices in the room
18. the child plays the flute for his mom
19. the man navigates on the water
20. the man digs the garden
21. the man hoes the garden
22. the man congratulates the woman
23. the girl braids her hair
24. the man cuts the onion
25. the girl does gymnastics on one leg
26. the man practices witchcraft with a stick
27. the boy sneezes in the handkerchief
28. the men do a puzzle on the table
29. the woman sieves the flour
30. the man skis down the hill

distractor

- bending
- grinding
- showering
- blow-drying
- sweeping
- rolling
- fencing
- descending
- boxing
- boils
- pinching
- climbing
- playing draughts
- cutting
- scootering
- wallpapering
- playing shuffleboard
- beeping
- sinking
- mowing
- raking
- greeting
- tying
- peeling
- hopping
- doing magic
- yawning
- playing cards
- pressing
- ice-skating

target sentence

31. the boy leaps the hole
32. the man photographs in the garden
33. the man bounces the ball
34. the boy fishes in the river
35. the boy glues the vase
36. the boy sledges down the hill
37. the girl rolls a hoop on the field
38. the woman wrings a towel
39. the man waters the garden
40. the man milks the cow
41. the man saws a shelve
42. the boy waves to his mother
43. the man plays billiards in the pub
44. the girl combs her hair
45. the child plays with a top
46. the man draws the beer
47. the children seesaw in the playground
48. the girl dives into the water
49. the man planes the cupboard
50. the boy rings the bell with one hand
51. the man carpenters a cupboard
52. the boy throws the ball
53. the man sails on the water
54. the woman stirs the food
55. the boy scratches the girl
56. the man picks a flower
57. the boy plays badminton on a campsite
58. the man begs on the floor
59. the woman mops the floor
60. the man folds the paper

distractor

- crawling
- filming
- heading
- camping
- stamping
- roller skating
- flying a kite
- kneading
- extinguishing
- patting
- drilling
- cheering
- playing tennis
- brushing
- playing marbles
- pumping
- swinging
- swimming
- grating
- drumming
- laying bricks
- catching
- rowing
- poking
- biting
- sowing
- playing tabletennis
- kneeling
- swabbing
- tearing

Action naming

1. wrestling
2. sieving
3. playing the flute
4. frying
5. filing
6. throwing
7. sewing
8. chopping
9. polishing
10. ploughing
11. picking
12. scratching
13. sneezing
14. seesawing
15. congratulating
16. rolling a hoop
17. painting
18. sailing
19. wringing
20. practising witchcraft
21. diving
22. playing hockey
23. digging
24. playing chess
25. squatting
26. skiing
27. playing with a top
28. doing a puzzle
29. hammering
30. combing

31. cutting
32. cycling
33. doing gymnastics
34. descending
35. photographing
36. braiding
37. bouncing
38. playing billiards
39. leaping
40. taking a bath
41. playing badminton
42. taking off
43. fishing
44. navigating
45. massaging
46. watering
47. begging
48. gluing
49. folding
50. hoeing
51. drawing beer
52. ringing a bell
53. milking
54. stirring
55. mopping
56. planing
57. waving
58. dicing
59. sledging
60. sawing

Sentence construction

1. climbing
2. ice-skating
3. kneeling
4. swinging
5. sweeping
6. bricklaying
7. sinking
8. pinching
9. swabbing
10. rolling
11. squeezing a horn
12. playing at marbles
13. scootering
14. peeling
15. landing
16. playing table tennis
17. pumping
18. wallpapering
19. playing shuffleboard
20. sowing
21. poking
22. playing cards
23. brushing
24. drilling
25. crawling
26. mowing
27. stamping
28. doing magic
29. flying a kite
30. roller-skating
31. grinding
32. catching
33. bending down
34. patting
35. boiling
36. drumming
37. blow-drying
38. playing at draughts
39. biting
40. fencing
41. yawning
42. raking
43. greeting
44. grating
45. kneading
46. heading
47. cheering
48. pressing
49. tearing
50. hopping
51. boxing
52. rowing
53. filming
54. playing tennis
55. cutting
56. camping
57. showering
58. swimming
59. extinguishing
60. tying

Object naming

1. roller brush
2. hose
3. fishing-rod
4. sailboat
5. leg
6. file
7. needle
8. frying pan
9. beam
10. axe
11. knee
12. glue
13. cue
14. jig saw puzzle
15. sock
16. dog
17. chessboard
18. airplane
19. seesaw
20. beggar
21. bell
22. hoop
23. fist
24. boat
25. flower
26. pavement
27. present
28. spoon
29. hairpin/-clip
30. wizard
31. flute
32. sieve
33. plane
34. mountain
35. ball
36. bath
37. cloth
38. train
39. saw
40. hammer
41. knife
42. ski
43. plough
44. mop
45. sheets
46. tap
47. dice
48. handkerchief
49. top
50. diving board
51. sleigh
52. bicycle
53. (hockey)stick
54. nail
55. shovel
56. racket
57. camera
58. hoe
59. comb
60. thumb

APPENDIX III

The individual scores on the different subtests

Below the individual scores of the Broca's aphasics (B: n=15), the anomics (A: n=19), and the Wernicke's aphasics (W: n=3), who participated in the present study and were not excluded on the different criteria discussed in chapter 2, are given. Subsequently, the scores of the normal controls (C: n=15) are provided. Both the subtest scores and the scores for the different types of verbs will be presented.

SUBTEST SCORES

	verb comprehension	sentence comprehension	action naming	object naming	sentence construction
B1	54	52	28	29	26
B2	46	55	14	26	12
B3	60	59	46	55	42
B4	51	56	21	30	14
B5	48	55	11	33	10
B6	60	58	29	42	20
B7	45	54	18	40	29
B8	55	58	30	50	20
B9	58	58	40	46	41
B10	57	58	25	32	29
B11	51	55	17	30	24
B12	49	53	10	26	17
B13	52	52	16	33	26
B14	58	58	25	36	32
B15	30	42	9	27	19
A1	52	53	45	43	36
A2	56	59	50	54	46
A3	56	58	26	40	18
A4	56	59	15	36	15
A5	58	57	27	39	13
A6	39	52	10	12	10
A7	60	58	39	51	27
A8	48	51	12	26	20
A9	60	56	20	50	28
A10	57	59	25	48	39

	verb comprehension	sentence comprehension	action naming	object naming	sentence construction
A11	56	59	38	52	44
A12	60	56	29	46	44
A13	59	58	40	47	43
A14	54	56	26	34	27
A15	53	58	26	40	41
A16	57	59	35	46	43
A17	57	57	9	22	13
A18	59	58	31	40	35
A19	58	59	22	53	44
W1	39	51	3	8	2
W2	57	56	39	45	35
W3	37	43	2	2	4
C1	58	60	54	56	51
C2	59	60	59	58	60
C3	59	60	55	57	57
C4	59	60	58	57	51
C5	59	59	50	54	51
C6	60	59	51	51	50
C7	60	58	56	55	59
C8	60	60	57	55	53
C9	60	60	58	60	50
C10	60	59	54	55	55
C11	59	58	52	56	53
C12	60	58	57	57	50
C13	59	59	54	58	54
C14	60	60	53	50	51
C15	60	58	51	51	56

TRANSITIVITY

	<i>Word level</i>		<i>Sentence level</i>	
	intransitive	transitive	intransitive	transitive
	transitive			
B1	12	16	11	15
B2	6	8	4	8
B3	20	26	20	22
B4	8	13	8	6
B5	6	5	3	7
B6	12	17	10	10
B7	14	16	8	12
B8	7	11	15	14
B9	20	20	21	20
B10	10	15	15	14
B11	8	9	14	10
B12	4	6	9	8
B13	6	10	14	12
B14	11	14	18	14
B15	5	4	10	9
A1	22	23	18	18
A2	25	25	23	23
A3	11	15	10	8
A4	8	7	9	6
A5	11	16	5	8
A6	4	6	5	5
A7	16	23	16	12
A8	6	6	9	11
A9	7	13	12	16
A10	10	15	20	19
A11	17	21	21	23
A12	15	14	25	19
A13	20	20	23	20
A14	13	13	15	12
A15	12	14	22	19
A16	21	14	23	20
A17	6	3	9	4
A18	10	21	15	21
A19	4	18	20	24

	<i>Word level</i>		<i>Sentence level</i>	
	intransitive	transitive	intransitive	
	transitive			
W1	1	2	1	1
W2	17	22	19	16
W3	1	1	3	1
C1	25	29	24	27
C2	29	30	30	30
C3	27	28	29	28
C4	29	29	24	27
C5	25	25	27	24
C6	25	26	24	26
C7	29	27	29	30
C8	28	29	26	27
C9	29	29	22	28
C10	27	27	26	29
C11	26	26	26	27
C12	29	28	25	25
C13	29	25	25	29
C14	25	28	25	26
C15	25	26	29	27

INSTRUMENTALITY AND NAME RELATION WITH A NOUN

	<i>Word level</i>			<i>Sentence level</i>		
	-I	+I-N	+IN	-I	+I-N	+IN
B1	7	11	10	9	7	10
B2	5	5	4	6	2	4
B3	16	15	15	15	14	13
B4	3	8	10	2	6	6
B5	3	5	3	6	3	1
B6	4	10	15	9	6	5
B7	8	12	10	8	5	7
B8	9	3	6	8	10	11
B9	13	11	16	14	14	13
B10	7	7	11	11	10	8
B11	4	7	6	5	11	8
B12	3	4	3	7	5	5
B13	6	4	6	10	6	10
B14	9	9	7	12	11	9
B15	2	3	4	8	6	5
A1	13	14	18	10	12	14
A2	14	18	18	14	16	16
A3	5	12	9	5	7	6
A4	2	7	6	5	5	5
A5	8	8	11	7	3	4
A6	1	5	4	2	4	4
A7	11	11	17	12	6	9
A8	4	3	5	7	6	7
A9	5	7	8	10	9	9
A10	7	9	9	10	12	17
A11	11	13	14	17	15	12
A12	6	10	13	15	16	13
A13	11	14	15	14	15	14
A14	5	11	10	8	9	10
A15	8	11	7	13	12	16
A16	11	13	11	16	13	14
A17	1	4	4	2	7	4
A18	11	11	9	11	12	12
A19	7	8	7	13	15	16

-I: noninstrumental; +I-N: instrumental, not name-related; +IN: instrumental, name-related

	<i>Word level</i>			<i>Sentence level</i>		
	-I	+I-N	+IN	-I	+I-N	+IN
W1	1	2	0	2	0	0
W2	14	11	14	13	12	10
W3	0	1	1	2	0	2
C1	17	17	20	18	17	16
C2	19	20	20	20	20	20
C3	19	19	17	19	19	19
C4	19	19	20	18	17	16
C5	16	16	18	16	18	17
C6	16	18	17	16	17	17
C7	18	19	19	20	20	19
C8	19	19	19	19	19	15
C9	20	18	20	17	15	18
C10	19	18	17	17	19	19
C11	17	17	18	19	16	18
C12	19	18	20	15	17	18
C13	16	20	18	18	18	18
C14	18	18	17	15	18	18
C15	15	17	19	18	18	20

-I: noninstrumental; +I-N: instrumental, not name-related; +IN: instrumental, name-related