Nick Riches

Newcastle University

December 4, 2018

10 - Sentence Production Models

Nick Riches

1a info at MI

1b. ML to FL

2a. Info at FL 2h El to Posl

The linking problem

3a Info at Post

4 Phonetic level

4a. Info at PhL

4b. PhL to ArtL

units of representation

Nick Riches

Five-minute exercise

Models of sentence production

- 1. Message level
- 2 Functional level
- 3. Positional level
- 4. Phonetic level

Bibliography

5 min ex.

Mods of sent. prod

1. Message level

1a. info at ML 1b. ML to FL

2. Functional

2a. Info at FL 2b. FL to PosL The linking problem

3. Positional leve

3a. Info at PosL PosL to PhonL

4. Phonetic level
4a. Info at PhL
4b. PhL to ArtL

Motivation for syllables.

units of representation
Bibliography

Nick Riches

5 min ex.

Mods of sent. prod

1. Message level

1b. ML to FL

2. Functional level

2a. Info at FL 2b. FL to PosL

The linking problem

3. Positional level

PosL to PhonL

4. Phonetic level

4a. Info at PhL

4b. PhL to ArtL

Motivation for syllables units of representation

Bibliography

Look at the following speech errors. What does this say about the integration between (a) planning the structure of the sentence, and (b) inserting words in sentences, and (c) producing phonemes.

1. I'm a weekend for maniacs.

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5 min ex.

- 1a. info at ML
- 1b. ML to FL
- 2a. Info at FL 2b. FL to PosL

- 3a. Info at PosL PosL to PhonL
- 4. Phonetic level 4a. Info at PhL
- 4b. PhL to ArtL

A	SUBJ + be + NOUN PHRASE + for + NOUN PHRASE					
В	I	am	a weekend	for	maniac + PL	
С	- 1	am	a weekend	for	maniac-s	

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Five-minute exercise

Models of sentence production

- 1. Message level
- 2 Functional level
- 3. Positional level
- 4. Phonetic level

Bibliography

Mods of sent. prod

1. Iviessage level

1b. ML to FL

Functional

2a. Info at FL

2b. FL to PosL

The linking problem

3. Positional leve

PosL to PhonL

4. Phonetic level

4a. Info at PhL 4b. PhI to ArtI

4b. PhL to ArtL

units of representation

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Mods of sent, prod

- 1. Message level Very abstract representation of what we are going to say
- 2. Functional level Activations of relevant lemmas. Still no syntactic frame
- Positional level Syntactic frame chosen, insertion of invariant lexemes/morphemes
- 4. Phonetic level Insertion of variant lexemes/morphemes and syllabification
- Articulatory level Speech motor programme assembled.

1b. ML to FI

4h Phl to Artl

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Mods of sent. prod

- 1. Message level
- 1b. ML to FL
- 2. Functional level
 - 2a. Info at FL
 2b. FL to PosL
 The linking problem
- The linking problem Errors in children
- 3. Positional level 3a. Info at PosL
- 4 Phonetic level
- 4a. Info at PhL
- 4b. PhL to ArtL

Motivation for syllables a units of representation

Bibliography

- 1. **Conceptual level** (corresponding to Garrett's message level)
- 2. **Formulation level** (corresponding to Garrett's Function, Positional, and Phonetic levels)
- Articulation level (corresponding to Garrett's Articulatory level)

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Models of sentence production

- 1. Message level
- 2 Functional level
- 3. Positional level
- 4. Phonetic level

Bibliography

min ex.

Mods of sent. prod

1. Message level

1a. info at ML 1b. ML to FL

2. Functional

2a. Info at FL 2b. FL to PosL The linking problem

Errors in children

3. Positional leve
3a. Info at PosL
PosL to PhonL

4. Phonetic level

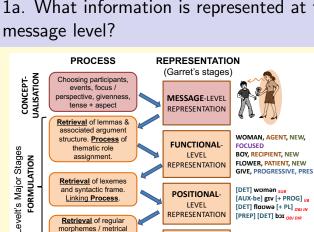
4a. Info at PhL

4b. PhL to ArtL

Motivation for syllable units of representation

libliography

1a. What information is represented at the



Retrieval of regular morphemes / metrical

structure

Regular phonological

processes

Retrieval of syllables /

articulation plans

Motor coding process

ARTICULATION

POSITIONAL-LEVEL

REPRESENTATION

PHONETIC-

LEVEL

REPRESENTATION

ARTICULATORY

-LEVEL REPRESENTATION [AUX-be] grv [+ PROG] VR [DET] flauwa [+ PL] [PREP] [DET] box OBLDIR

ðəWUmənızgIvıŋ ðflauwəztəðəbəi

ðə wo mə nız gı vın ða flors waz ta ða har

instructions

ERRORS

Get out of the clark!



I love to do jigsaws (crosswords) I don't want to jump ahead of the gun

> I'm a weekend for maniacs I'd hear one if I knew it

I'm a weekend for maniacs People read the backses of boxes Terry charts Leading list Reading rist

Stammering?

10 - Sentence Production Models

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1a info at MI

1b. ML to FI

4b. PhL to ArtL

1a. What information is represented at the message level?

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min ex.

1a. info at ML

1b. ML to FL

2. Functional level

2a. Info at FL

The linking pro

3 Positional le

3. Positional level
3a. Info at PosL
PosL to PhonL

Phonetic level

a. Info at PhL

4b. PhL to ArtL

Motivation for syllables

Bibliography

Entities we wish to talk about, and what kind of **situation** or **event** they are participating in.

Relational information, e.g. what is the relationship between an entity and an action? Is that entity the AGENT of the action, or the PATIENT of the action?

1a. What information is represented at the message level?

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1a info at MI

1b. ML to FL

2a. Info at FL

4h Phl to Artl

We take a particular **perspective** on the action.

We decide which entity to **focus** on.

Focused element expressed using full Noun Phrase (not pronoun), and placed sentence finally.

1. I saw a strange man in the street. [He TOPIC | was wearing [the weirdest clothes I've ever seen FOCUS].

1a. What information is represented at the message level?

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1a info at MI

1b. ML to FL

2a. Info at FL

2h El to Posl

The linking problem

3a Info at Post

4 Phonetic level

4a. Info at PhL

4h Phl to Artl

units of representation

Focus on the verb

Tense

Are we inside or outside of the event? (grammatical aspect)

1a. What information is represented at the message level?

- 1. John has chopped the carrot PERFECTIVE aspect for completed event
- 2. John is chopping the carrot PROGRESSIVE aspect for ongoing event

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1a info at MI 1b. ML to FL

2a. Info at FL

4h Phl to Artl

1b. How do we get from the Message level to the

PHONETIC-

LEVEL

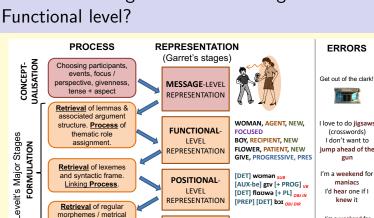
REPRESENTATION

ARTICULATORY

-LEVEL REPRESENTATION

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morphemes / metrical

structure

Regular phonological

processes

Retrieval of syllables /

articulation plans

Motor coding process

ARTICULATION

ðəWUmənizgIvin ðflauwəztəðəbəi

ðə wo mə nız gı vın ða flors waz ta ða har

instructions

ERRORS



I love to do jigsaws (crosswords) I don't want to jump ahead of the gun

I'm a weekend for maniacs I'd hear one if I knew it

I'm a weekend for maniacs People read the backses of boxes Terry charts Leading list Reading rist

Stammering?

1b. ML to FL

4h Phl to Artl

1b. How do we get from the Message level to the Functional level?

10 - Sentence Production Models Nick Riches

1b. ML to FL

2a. Info at FL 2h El to Posl The linking problem

3a Info at Post

4 Phonetic level

4h Phl to Artl

units of representation

We **retrieve** (a) the lemmas (b) the argument structure We assign thematic thematic relations

1b. How do we get from the Message level to the Functional level?

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5 min ex.

Mods of sent. prod

1. Message level

1a. info at MI

1b. ML to FL

2. Functional level

2a. Info at FL

The linking problem

3. Positional le

PosL to PhonL

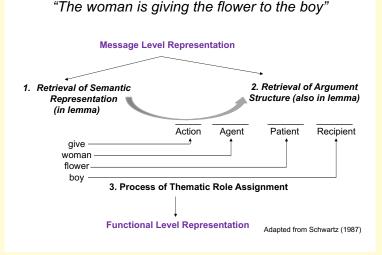
4. Phonetic level

4h PhI to ArtI

4b. PhL to ArtL

Motivation for syllables a units of representation

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Five-minute exercise

Models of sentence production

- 1. Message leve
- 2. Functional level
- 3 Positional level
- 4. Phonetic level

Bibliography

min ex.

Mods of sent. prod

Message level
 info at MI

1b. ML to FL

2. Functional level

2a. Info at FL 2b. FL to PosL The linking problem

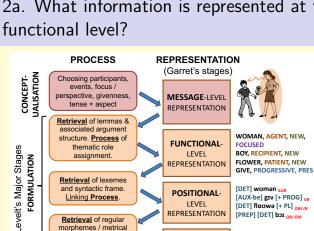
3. Positional leve

3a. Info at PosL
PosL to PhonL
4. Phonetic level

4a. Info at PhL 4b. PhL to ArtL Motivation for syllables units of representation

Bibliography

2a. What information is represented at the



Retrieval of regular morphemes / metrical

structure

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Retrieval of syllables /

articulation plans

Motor coding process

ARTICULATION

LEVEL [DET] flauwa [+ PL] REPRESENTATION [PREP] [DET] box ORLDIR

PHONETIC-

LEVEL

REPRESENTATION

ARTICULATORY

-LEVEL REPRESENTATION ðəWUmənızgIvıŋ ðflauwəztəðəbəi

ðə wo mə nız gı vın ða flors waz ta ða har

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ERRORS

Get out of the clark!

I love to do jigsaws

(crosswords)

I don't want to

jump ahead of the

gun

I'm a weekend for

maniacs

I'd hear one if I

knew it

I'm a weekend for

maniacs

People read the

backses of boxes

Terry charts

Leading list Reading rist

Stammering?

1a info at MI 1b MI to FI

2a Info at FI

4b. PhL to ArtL

14 / 39

2a. What information is represented at the functional level?

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min ex.

Mada af asset in

1 M.... L....

1a. info at ML

1b. ML to FL

2. Functional level

2a. Info at FL

2b. FL to PosL The linking problem

. Positional level

3a. Info at PosL PosL to PhonL

4. Phonetic level

4a. Info at PhL

4b. PhL to ArtL

Antivation for sv

units of representation

Bibliography

Semantic information: arguments with correct roles
Focusing information
No syntactic information

2b. How do we get from the Functional level to the Positional level?

REPRESENTATION

(Garret's stages)



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ERRORS

Get out of the clark!

I love to do jigsaws

(crosswords)

I don't want to

jump ahead of the

gun

I'm a weekend for

maniacs

I'd hear one if I

knew it

I'm a weekend for

maniacs

People read the

backses of boxes

Terry charts

Leading list Reading rist

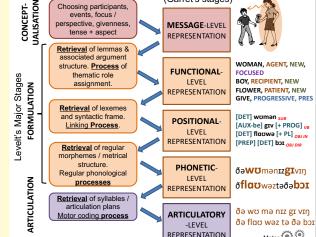
Stammering?

instructions

1b MI to FI

2h FI to Posl

4b. PhL to ArtL



PROCESS

Choosing participants,

2b. How do we get from the Functional level to the Positional level?

We **retrieve** (a) the lexemes (b) the syntactic frame

the frame.

We **link** or **map** the arguments to their correct position in

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1b. ML to FL

2a. Info at FL

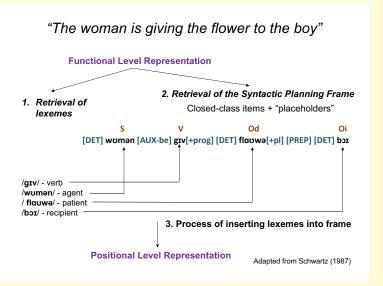
2h FI to Posl

3a Info at Post

4h Phl to Artl

units of representation

2b. How do we get from the Functional level to the Positional level?



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1b. ML to FL

2h FI to Posl

4h Phl to Artl

2b. How do we get from the Functional level to the Positional level?

10 - Sentence Production Models

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min ex.

M 1 C .

1 Message level

- 1. Ivicasage ieve
- 1b. ML to FL
- 2. Functional level
 - 2a. Info at FL 2b FI to Post
 - 2b. FL to PosL

Errors in children

- 3a. Info at PosL
- PosL to PhonL
- I. Phonetic level
 - . Into at PhL
- 4b. PhL to ArtL Motivation for syllable

units of representation

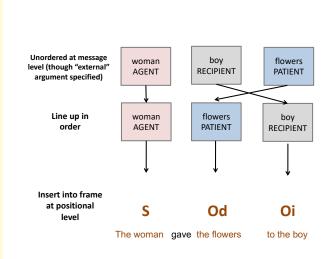
Bibliography

The syntactic planning frame consists of (a) closed class morphemes, and (b) slots/placeholders for open class morphemes, e.g.

- 1. [DET] ___ [AUX-be] ___ [+prog][DET] ___ [PREP][DET] ___ (dative, e.g. the woman is giving the flowers to the boy)
- 2. [DET] ___ [AUX-be] ___ [+perf][PREP][DET] ___ (passive, e.g. the cat was chased by the dog)
- 3. [DET] ___[+past][DET]___. [PREP][DET]__. (locative, e.g. the dog chased the cat up the tree)

The linking problem

Jackendoff, 1990



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5 min ex.

1 Massaus Israel

- 1a. info at ML
- 1b. ML to FL
- 2. Functional level
- 2a. Info at FI
- 2b. FL to PosL

The linking problem

- 3. Positional le
- 3a. Info at PosL
- 4. Phonetic level
- 4a. Info at PhL
- 4b. PhL to ArtL

Motivation for syllabl

Bibliography

The linking problem

But note this won't always give the right results, e.g.

1. The man_{AG} gave the woman_{REC} the present_{PAT}.

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Mods of sent, prod

1. Message level

1a. info at ML 1b. ML to FL

2 Functional leve

Functional leve
 Info at FL

2b. FL to PosL

The linking problem

3. Positional level

3a. Info at PosL PosL to PhonL

4. Phonetic level

4a. Info at PhL

4b. PhL to ArtL

Motivation for syllables units of representation

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Errors in children

10 - Sentence Production Models

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1 Message level

1a. info at ML

1b. ML to FL

2. Functional level

2a. Info at FL 2b. FL to PosL

The linking problem

Errors in children

3. Positional level
3a. Info at PosL

PosL to PhonL

. Phonetic level

a. Info at PhL

4b. PhL to ArtL

nits of representation

Bibliography

Have a look at these errors in children. How have they arisen?

- 1. Can I fill some salt into the bear?
- 2. I'm going to cover a screen over me. (Bowerman, 1982)
- 3. The lady is filling the sweets into the jar.
- 4. The lady is covering the scarf on her head. (Ebbels, 2007)

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5 min ex.

1. Message level

1a. info at ML

1b. ML to FL

2. Functional level

2a. Info at Fl

2b. FL to Pos

Errors in children

3. Positional le

3a. Info at Pos Post to Phont

. Phonetic level

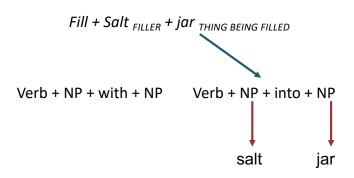
4a. Info at PhL

4b. PhL to ArtL

Motivation for syllab

Bibliography

Why are these errors happening?



Mis-selection of frame at positional level, but correct linking of arguments for that frame

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Five-minute exercise

Models of sentence production

- 1. Message level
- 2 Functional leve
- 3. Positional level
- 4. Phonetic leve

Bibliography

min ex.

Mods of sent. pro

1. Message level

1a. info at ML 1b. ML to FL

P Functional leve

2a. Info at FL

2b. FL to PosL The linking problem

3. Positional level

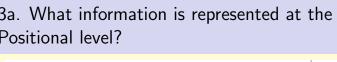
3a. Info at PosL PosL to PhonL

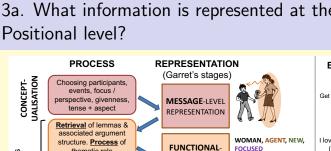
4. Phonetic level
4a. Info at PhL
4b. PhL to ArtL

Motivation for syllable units of representation

Bibliography

3a. What information is represented at the





FUNCTIONALthematic role LEVEL assignment. REPRESENTATION

Retrieval of lexemes

and syntactic frame.

Linking Process.

Retrieval of regular morphemes / metrical

structure

Regular phonological

processes

Retrieval of syllables /

articulation plans

Motor coding process

evelt's Major Stages

-ORMULATION

ARTICULATION

POSITIONAL-LEVEL REPRESENTATION

PHONETIC-

LEVEL

REPRESENTATION

ARTICULATORY

-LEVEL REPRESENTATION ðəWUmənızgIvıŋ ðflauwəztəðəbəi

BOY, RECIPIENT, NEW

[DET] woman cue

FLOWER, PATIENT, NEW

GIVE, PROGRESSIVE, PRES

[AUX-be] grv [+ PROG] VR

[DET] flauwa [+ PL]

[PREP] [DET] box ORLDIR

ðə wo mə nız gı vın ða flors waz ta ða har

instructions

ERRORS

Get out of the clark!



I love to do jigsaws (crosswords) I don't want to jump ahead of the gun

I'm a weekend for maniacs I'd hear one if I knew it

I'm a weekend for maniacs People read the backses of boxes Terry charts Leading list Reading rist

Stammering?

10 - Sentence Production Models

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1b MI to FI

The linking problem

3a Info at Post

4b. PhL to ArtL

3a. What information is represented at the Positional level?

10 - Sentence Production Models

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1b. ML to FL

2a. Info at FL 2h El to Posl

3a Info at Post

4h Phl to Artl

units of representation

Now we have syntactic information!

We represent the sentence frame, and lexemes which are phonetically invariant (i.e. their pronunciation is similar whatever context they occur in)

3b. How do we get from the Positional level to the Phonetic level?

We retreive (a) segments, and (b) metrical structure

We assemble a phonological sequence (consisting of

segments, combined with metrical structure).

10 - Sentence Production Models

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min ex.

Mode of cont. pre

- 1 Message level
- 1a. info at MI 1b. ML to FL
- 25. WE to 12
- 2. Functional level
- 2a. Info at FL 2b. FL to PosL The linking problem
- . Positional leve

PosL to PhonL

- Phonetic level
- a. Info at PhL
- 4b. PhL to ArtL

Motivation for syllables as units of representation

Bibliography

3b. How do we get from the Positional level to the Phonetic level?

Positional to Phonetic level "Phonological assembly"

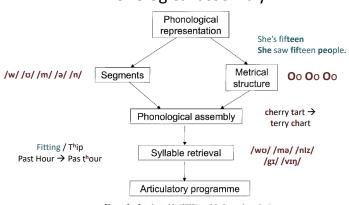


Figure 3. Levelt et al.'s (1999) model of speech production.

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5 min ex.

Mods of sent pro

- 1. Message level
- 1a. info at M
- 1b. ML to FL
- 2. Functional level
 - 2a. Info at FL
 - 2b. FL to PosL
- Errors in children
 - 6. Positional leve
- PosL to PhonL
- . Phonetic leve
- a. Info at PhL
- 4b. PhL to ArtL

Motivation for syllables units of representation

Bibliography

3b. How do we get from the Positional level to the Phonetic level?

10 - Sentence Production Models

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- 1b. ML to FI

- Post to Phont

- 4h Phl to Artl

Evidence that segments and metrical structure are stored separately:

- Stress shift
 - 1.1 She's fif-teen / I saw fif-teen men.
 - 1.2 Five o'clock in the after-noon / We had after-noon tea
 - 1.3 It was ca-ta-stroph-ic / It was a ca-ta-strophic failure
- 2. Evidence from aphasia (Nickels & Howard, 1999)
 - 2.1 Aphasic individuals often produce phonemes in correct order, but not correct stress pattern
 - 2.2 Are much better at naming items with more frequent stress patterns

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Five-minute exercise

Models of sentence production

- 1. Message level
- 2 Functional level
- 3 Positional level
- 4. Phonetic level

Bibliography

min ex.

Mods of sent pro

1. Message level

la info at MI

1b. ML to FL

Functional

. Functional

2a. Info at FL

2h Fl to Posl

The linking problem

Errors in chile

. Positional leve

3a. Info at PosL

PosL to PhonL

4. Phonetic level

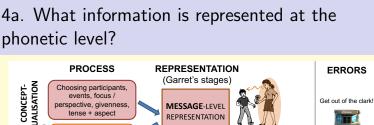
4a. Info at PhL

4b. PhL to ArtL

Motivation for syllable units of representation

Chillia anna a la c

4a. What information is represented at the



Retrieval of lemmas & associated argument

structure. Process of

thematic role

assignment.

Retrieval of lexemes

and syntactic frame.

Linking Process.

Retrieval of regular

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processes

Retrieval of syllables /

articulation plans

Motor coding process

evelt's Major Stages

-ORMULATION

ARTICULATION

FUNCTIONAL-LEVEL REPRESENTATION

LEVEL

PHONETIC-

LEVEL

REPRESENTATION

ARTICULATORY

-LEVEL REPRESENTATION WOMAN, AGENT, NEW, FOCUSED **BOY, RECIPIENT, NEW** FLOWER, PATIENT, NEW GIVE, PROGRESSIVE, PRES

[DET] woman cue POSITIONAL-[AUX-be] grv [+ PROG] VR [DET] flauwa [+ PL] REPRESENTATION [PREP] [DET] box OBLDIR

> ðəWUmənızgIvıŋ ðflauwəztəðəbəi

ðə wo mə nız gı vın ða flors waz ta ða har

instructions

ERRORS



I love to do jigsaws (crosswords) I don't want to jump ahead of the gun

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I'm a weekend for maniacs People read the backses of boxes Terry charts Leading list Reading rist

Stammering?

10 - Sentence Production Models

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1b MI to FI

4a Info at PhI

4b. PhL to ArtL

4a. What information is represented at the phonetic level?

10 - Sentence Production Models

Nick Riches

min ex.

Mods of sent pro

- 1 Message level
- 1a. info at N
- 1b. ML to FL
- 2. Functional level
 - 2a. Info at FL
- The linking proble
 - Errors in children
- 3. Positional level
 3a. Info at PosL
- . Phonetic level
- 4a. Info at PhL
- 4b. PhL to ArtL Motivation for syllables

521.12

A phonological sequence consisting of segments, and information related to metrical structure (e.g. word stress).

Phonetically-variant lexemes/phonemes are realised at this level, e.g.

- 1. DETERMINER: A book / An elephant
- 2. DETERMINER: The (ŏı) man / The (ŏiː) essay (tongue is retracted for second)
- PARTICLE: I want to (tu:) eat / I want to (tə) drink (second is longer and involves more lip rounding)

4a. What information is represented at the phonetic level?

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- 1a info at MI 1b. ML to FI

- 3a Info at Post

4a. Info at PhL

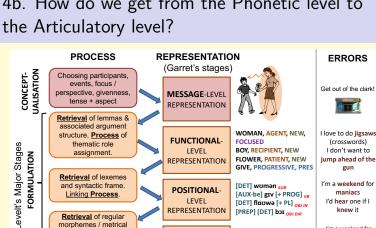
4h Phl to Artl

A number of errors may occur at this level including

- 1. Swapping errors, e.g. cherry tart \Rightarrow terry chart
- 2. Anticipation errors, e.g. cherry tart \Rightarrow terry tart
- 3. Perseveration errors, e.g. cherry tart \Rightarrow cherry chart

NB these errors respect syllabic position, so perhaps they occur later at the syllable retrieval stage?

4b. How do we get from the Phonetic level to



PHONETIC-

LEVEL

REPRESENTATION

ARTICULATORY

-LEVEL REPRESENTATION

Retrieval of regular morphemes / metrical

structure

Regular phonological

processes

Retrieval of syllables /

articulation plans

Motor coding process

ARTICULATION

[PREP] [DET] box ORLDIR

ðəWUmənızgIvıŋ ðflauwəztəðəbəi

ðə wo mə nız gı vın ða flors waz ta ða har

instructions

10 - Sentence Production Models

Nick Riches

1b MI to FI

gun

maniacs

knew it

I'm a weekend for

maniacs

People read the

backses of boxes

Terry charts

Leading list Reading rist

Stammering?

4b. PhL to ArtL

4b. How do we get from the Phonetic level to the Articulatory level?

We retrieve syllables, along with their articulation plans.

We assemble motor instructions.

10 - Sentence Production Models

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1b. ML to FL

2a. Info at FL

2h El to Posl The linking problem

3a Info at Post

4 Phonetic level

4h Phl to Artl

units of representation

10 - Sentence Production Models

Nick Riches

1a info at MI 1b. ML to FL

4h Phl to Artl

Motivation for syllables as units of representation

```
(a) Liaison (epenthesis)
```

```
Beer and chips \rightarrow bio for the s...
                   CVV CVC CVC C....
```

Why are you sad? \rightarrow war a: ju: CVV CV CVV CVC

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- 1b. ML to FL

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- Motivation for syllables as

units of representation

(b) Resyllabification

A book \rightarrow ...a bok ...V CVC

An elephant \rightarrow ... \rightarrow ne fant ...V CV CV CVCC

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- - 4h Phl to Artl

 - Motivation for syllables as units of representation

(b) Resyllabification

- Football → fut bpl
- 2. tipping \rightarrow th pin
- 3. Glass tower \rightarrow gla:s t^h av wə
- 4. Last hour \rightarrow lass that we

(syllable final)

(syllable initial)

(syllable initial)

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Nick Riches

Mods of	

1. Message level

2. Functional level

- 2a. Info at FL
- 2b. FL to PosL

The linking problem Errors in children

3. Positiona

- 3a. Info at PosL PosL to PhonL
- osL to PhonL

4. Phonetic level

- 4a. Info at PhL
- 4b. PhL to ArtL

Motivation for syllables as units of representation

Ribliography

ワ wa	ラ ra	ヤ ya	マ ma	/\ ha	ナ na	タ ta	サ sa	カ ka	ア a
wa		ya							
	IJ ri		≅ mi	ا hi	= ni	チ chi	シ shi	+ ki	イ i
	ル	ュ	᠘	フ	ヌ	ツ	ス	ク	ウ
	ru	yu	mu	fu	nu	tsu	su	ku	u
	レ		メ	>	ネ	テ	セ	ケ	エ
	re		me	he	ne	te	se	ke	e
ヲ		3	Ŧ	ホ	1	۲	ソ	П	オ
wo	ro	yo	mo	ho	no	to	so	ko	o

10 - Sentence Production Models

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1b. ML to FL

I'm a weekend for

- 4h Phl to Artl Motivation for syllables as

units of representation

PROCESS REPRESENTATION (Garret's stages)

Choosing participants, events, focus / perspective, givenness, tense + aspect

Retrieval of lemmas & associated argument

structure. Process of

thematic role

assignment.

MFSSAGE-LEVEL REPRESENTATION

POSITIONAL-

LEVEL

REPRESENTATION

PHONETIC-

LEVEL

REPRESENTATION

ARTICULATORY

-I FVFI REPRESENTATION



WOMAN, AGENT, NEW, FUNCTIONAL-LEVEL REPRESENTATION

FOCUSED BOY, RECIPIENT, NEW FLOWER, PATIENT, NEW GIVE, PROGRESSIVE, PRES

[DET] woman sug [AUX-be] grv [+ PROG] VR

[DET] flagwa [+ PL] [PREP] [DET] box OBLOW

ðə**W**Umənız**gı**vın ðflauwəztəðəbəi

ðə wg mə nız gı vin ðə flav wəz tə ðə bər

instructions

FORMULATION Retrieval of lexemes and syntactic frame. Linking Process. structure.

UALISATION

CONCEPT-

Levelt's Major Stages

ARTICULATION

Retrieval of regular morphemes / metrical

Regular phonological processes

Retrieval of syllables / articulation plans Motor coding process

ERRORS

Get out of the clark!



I love to do iigsaws (crosswords) I don't want to iump ahead of the gun

> maniacs I'd hear one if I knew it

I'm a weekend for maniacs People read the hackses of hoves Terry charts Leading list Reading rist

Stammering?

Nick Riches

Five-minute exercise

Models of sentence production

- 1. Message leve
- 2 Functional level
- 3. Positional level
- 4. Phonetic level

Bibliography

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Mods of sent. prod

Message level
 info at MI

1b. ML to FL

2. Functional le

2a. Info at FL 2b. FL to PosL The linking problem

3. Positional leve

3a. Info at PosL PosL to PhonL

4. Phonetic level
4a. Info at PhL
4b. PhL to ArtL
Motivation for syllables as units of representation

Bibliography

Nick Riches

1a info at MI

1b. ML to FL

2h El to Posl

4h Phl to Artl

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