10 - Sentence Production Models

Nick Riches

Newcastle University

December 5, 2018

10 - Sentence Production Models

Nick Riches

5 min ex.

Mods of sent, prod

1. Message level

la info at MI

1b. ML to FL

2. Functional level

2a. Info at FL

2b. FL to PosL

The linking problem Errors in children

Positional lev
 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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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

. Functional le

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

Errors in children

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

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1 Massaga laval

1a. info at ML

1b. ML to FL

2. Functional level

2a. Info at FL

The linking problem

B. Positional leve

PosL to PhonL

4. Phonetic level

Info at PhI

4b. PhL to ArtL

Motivation for syllable

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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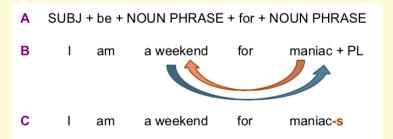
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5 min ex.

Maria Committee

- 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 le
- PosL to PhonL
- 4. Phonetic level
- 4a. Info at PhL
- 4b. PhL to ArtL
- Masimaian for an

units of representation



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Models of sentence production

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

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Mods of sent. prod

1 Message level

1a info at MI

1b. ML to FL

2. Functional

2a. Info at FL

2b. FL to PosL

The linking problem

Positional leve
 3a. Info at PosL

PosL to PhonL

4. Phonetic level

4b. PhL to ArtL

Motivation for syllable units of representation

- 1b. ML to FI

- 4h Phl to Artl

- 1. Message level Very abstract representation of what we are going to say
- 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.

Levelt's model

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Mode of cont. pro

- 1. Message level
- 1a. info at ML 1b. ML to FI
- 2. Functional level
 - 2a. Info at FL 2b. Fl. to Posl
- The linking proble
- 3. Positional le
- 3a. Info at PosL
- 4. Phonetic level
 - fa. Info at PhL
- 4b. PhL to ArtL

Motivation for syllables a units of representation

- 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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Five-minute exercise

Models of sentence production

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

Bibliography

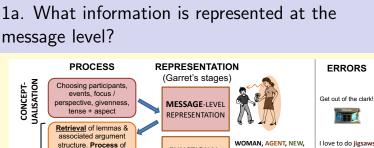
min ex.

Mods of sent. prod

- 1. Message level
- 1a. info at ML 1b. ML to FI
- Functional I
- 2a. Info at FL
- 2b. FL to PosL The linking problem
- Errors in children
- 3a. Info at PosL
 Posl to Phoni
- 4. Phonetic level 4a. Info at PhL
- 4b. PhL to ArtL Motivation for sylla

units of representation

1a. What information is represented at the



thematic role

assignment.

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

FUNCTIONAL-LEVEL REPRESENTATION

POSITIONAL-

LEVEL

REPRESENTATION

PHONETIC-

LEVEL

REPRESENTATION

ARTICULATORY

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

[DET] woman cue [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



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?

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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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. . . .

1 Massaus Israel

1a. info at ML

1b. ML to FL

2. Functional level

2a. Info at FL

The linking problen

3a. Info at PosL

Phonetic level

la. Info at PhL

4b. PhL to ArtL

Assissation for and

units of representation

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 Functional level?

LEVEL

REPRESENTATION

ARTICULATORY

-LEVEL REPRESENTATION

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1b. ML to FL

4b. PhL to ArtL

PROCESS REPRESENTATION (Garret's stages) UALISATION CONCEPT-Choosing participants, events, focus / perspective, givenness, MFSSAGE-LEVEL tense + aspect REPRESENTATION Retrieval of lemmas & associated argument WOMAN, AGENT, NEW, structure. Process of FUNCTIONAL-**FOCUSED** thematic role evelt's Major Stages LEVEL **BOY, RECIPIENT, NEW** assignment. **-ORMULATION** FLOWER, PATIENT, NEW REPRESENTATION GIVE, PROGRESSIVE, PRES Retrieval of lexemes and syntactic frame. [DET] woman cue POSITIONAL-Linking Process. [AUX-be] grv [+ PROG] VR LEVEL [DET] flauwa [+ PL] REPRESENTATION [PREP] [DET] box ORLDIR Retrieval of regular morphemes / metrical structure PHONETICðəWUmənizgIvin

Regular phonological

processes

Retrieval of syllables /

articulation plans

Motor coding process

ARTICULATION

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

ðflauwəztəðəbəi

ðə wo mə nız gı vın

instructions

ða flors waz ta ða har

Stammering?

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

We **retrieve** (a) the lemmas (b) the argument structure

We assign thematic thematic relations

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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

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

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o 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 leve

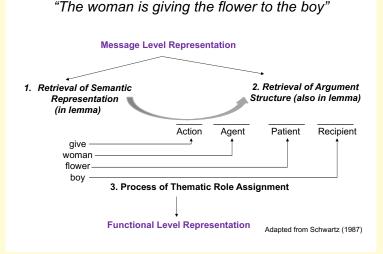
3a. Info at PosL PosL to PhonL

. Phonetic level

4b. PhL to ArtL

Motivation for s

Motivation for syllables 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
 In info at MI

1b. ML to FL

2. Functional level

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

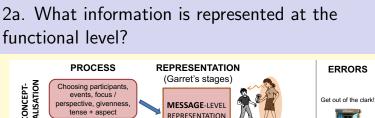
3. Positional leve
3a. Info at PosL

3a. Info at PosL PosL to PhonL

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

Motivation for syllables a

units of representation
Bibliography



WOMAN, AGENT, NEW,

BOY, RECIPIENT, NEW

FLOWER, PATIENT, NEW

GIVE, PROGRESSIVE, PRES

FOCUSED



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?

ERRORS

1a info at MI

10 - Sentence

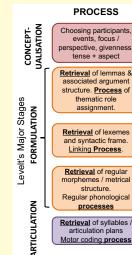
Production Models

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2a Info at FI

4b. PhL to ArtL



Retrieval of lemmas & associated argument structure. Process of thematic role assignment. Retrieval of lexemes and syntactic frame. Linking Process. Retrieval of regular morphemes / metrical structure Regular phonological processes

articulation plans

Motor coding process

FUNCTIONAL-LEVEL REPRESENTATION

PHONETIC-

LEVEL

REPRESENTATION

ARTICULATORY

-LEVEL REPRESENTATION

[DET] woman cue POSITIONAL-[AUX-be] grv [+ PROG] VR LEVEL REPRESENTATION

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

ðəWUmənızgIvıŋ ðflauwəztəðəbəi

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

instructions

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

Semantic information: arguments with correct roles

Focusing information

No syntactic information

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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

4a. Info at PhL

4h Phl to Artl

units of representation

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

ARTICULATORY

-LEVEL REPRESENTATION



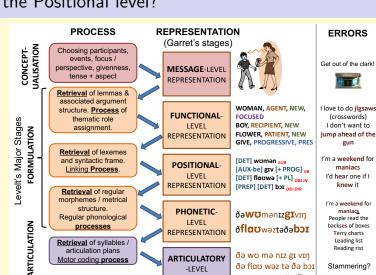
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1b MI to FI

2h FI to Posl

4b. PhL to ArtL



Retrieval of syllables /

articulation plans

Motor coding process

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

Leading list Reading rist Stammering?

ERRORS

(crosswords)

I don't want to

gun

maniacs

I'd hear one if I

knew it

I'm a weekend for

maniacs

People read the

backses of boxes

Terry charts

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

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1. Massaura lavial

1a. info at M

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

Phonetic level

Info at PhL

4b. PhL to ArtL

Motivation for syllable

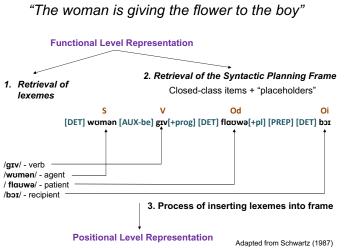
Bibliography

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

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

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?

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Mods of sent proc

- 1. Message level
- 1a. info at MI 1b. ML to FL
- 2 Eunstianal lava
- 2a. Info at FL
- 2b. FL to PosL The linking problem
- Errors in children

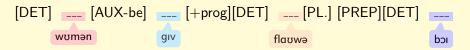
 R Positional leve
- PosL to PhonL
- 4. Phonetic level
- a. Info at PhL
- 4b. PhL to ArtL Motivation for syllables

Bibliography

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

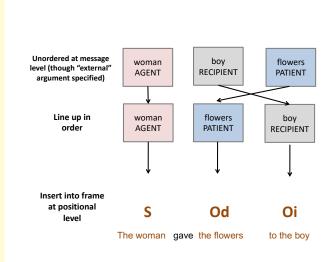
- 1. [DET] ___ [AUX-be] ___ [+prog][DET] ___ [PREP][DET] ___ (dative, e.g. the woman is giving the flowers to the boy)
- 2. [DET] ___ [AUX-be] ___ [+perf][PREP][DET] ___ (passive, e.g. the cat was chased by the dog)
- 3. [DET] ___[+past][DET]___. [PREP][DET]__. (locative, e.g. the dog chased the cat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

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



The linking problem

Jackendoff, 1990



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Made of sout over

- 1 Massaga laval
- 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 syllable

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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Mada of sout on

1. Message level

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

2. Functional level

2. Functional leve

2b. FL to PosL

The linking problem Errors in children

3. Positional leve

PosL to PhonL

4. Phonetic level

4a. Info at PhL

4b. PhL to ArtL

Motivation for syllables units of representation

Errors in children

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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)

1b. ML to FI

2a. Info at FL

Errors in children

4h Phl to Artl

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Made of sout and

1. Message level

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

2a. Info at Fl

2b. FL to Posl

Errors in children

. Positional lev

3a. Info at Pos PosL to PhonL

. Phonetic level

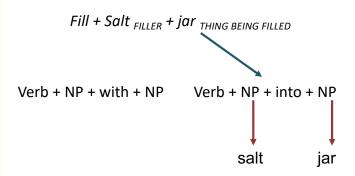
4h PhI to ArtI

4b. PhL to ArtL

Motivation for syllables a units of representation

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 level

Bibliography

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Mods of sent. prod

1. Message level

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

2. Functional leve

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

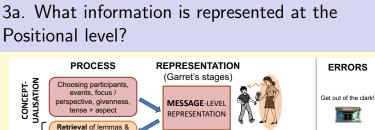
3. Positional level

PosL to PhonL

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

units of representation

PROCESS REPRESENTATION **ERRORS**



associated argument

structure. Process of

thematic role

assignment.

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

FUNCTIONAL-LEVEL REPRESENTATION

POSITIONAL-

LEVEL

REPRESENTATION

PHONETIC-

LEVEL

REPRESENTATION

ARTICULATORY

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

WOMAN, AGENT, NEW,

BOY, RECIPIENT, NEW

FLOWER, PATIENT, NEW

GIVE, PROGRESSIVE, PRES

FOCUSED

ðəWUmənızgIvıŋ ðflauwəztəðəbəi

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



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

Stammering?

Production Models Nick Riches

10 - Sentence

1b MI to FI

1a info at MI

The linking problem

3a Info at Post

4b. PhL to ArtL

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

We represent the sentence frame, and lexemes which are phonetically invariant (i.e. their pronunciation is similar

Now we have syntactic information!

whatever context they occur in)

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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

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).

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1b. ML to FL

2a. Info at FL 2h El to Posl

PosL to PhonL

4h Phl to Artl

units of representation

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

Positional to Phonetic level "Phonological assembly"

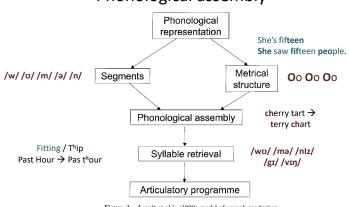


Figure 3. Levelt et al.'s (1999) model of speech production.

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Mods of sent. prod

1. Message level

1b. ML to FL

2 Functional

2. Functional level

2a. Into at FL

ZD. FL to POSL

Errors in children

3. Positional leve

Post to Phont

osL to PhonL

Phonetic lev

. Filohetic levi

4b. PhL to ArtL

Motivation for sy

Motivation for syllable units of representation

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

10 - Sentence Production Models

Nick Riches

min ex.

Mods of sent prod

- .. Message level
- 1a. info at N
- 1b. ML to FL
- 2. Functional level
- 2a. Info at FL
- The linking pro
- Errors in children
- 3a. Info at PosL

PosL to PhonL

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

Bibliography

Evidence that segments and metrical structure are stored separately:

- 1. 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 **fai**lure
- 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, e.g. **co**-tton *versus* bam-**boo**

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- 4. Phonetic level

1a info at MI 1b. ML to FI

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

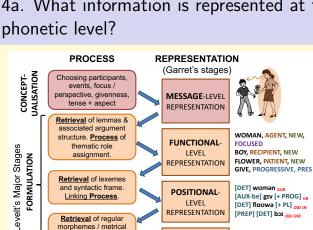
3a Info at Post

4 Phonetic level

4a. Info at PhL 4h Phl to Artl

units of representation

4a. What information is represented at the



Retrieval of regular

morphemes / metrical

structure

Regular phonological

processes

Retrieval of syllables /

articulation plans

Motor coding process

ARTICULATION

LEVEL REPRESENTATION

PHONETIC-

LEVEL

REPRESENTATION

ARTICULATORY

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

ðəWUmənızgIvıŋ ðflauwəztəðəbəi

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

instructions

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Stammering?

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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?

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Nick Riches

min ex.

Mods of sent. prod

- L. Message level
- 1a. info at M
- 1b. ML to FL
- 2. Functional level
 - 2a. Info at FL
 - The linking problem
 - 3. Positional level
 3a. Info at PosL
 - . Phonetic level
 - 4a. Info at PhL
 - 4a. Info at PhL 4b. Phl to Artl
- Motivation for syllables as units of representation

Bibliography

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 (ŏə) man / The (ŏi:) 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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min ex.

Mods of sent pro

- 1. Message level
- 1a. info at ML 1b. ML to FI
- 2. Functional leve
- 2a. Info at FL
- The linking probler
- 3. Positional leve
- 3a. Info at PosL PosL to PhonL
- . Phonetic level

4a. Info at PhL

4h Phl to Artl

Motivation for syllables as units of representation

Bibliography

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

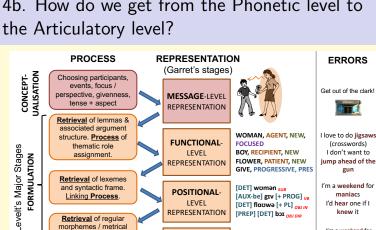
PHONETIC-

LEVEL

REPRESENTATION

ARTICULATORY

-LEVEL REPRESENTATION



Retrieval of regular morphemes / metrical

structure

Regular phonological

processes

Retrieval of syllables /

articulation plans

Motor coding process

ARTICULATION

[DET] flauwa [+ PL] REPRESENTATION [PREP] [DET] box OBLDIR

> 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

Nick Riches

min ex.

Mods of sent. proc

- 1 Message level
- 1a. info at MI 1b. ML to FL
- 0 = .: ...
- 2. Functional level
- 2a. Info at FL

2b. FL to PosL The linking problem

Errors in children

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

units of representation

10 - Sentence Production Models

Nick Riches

min ex.

......

- 1. Message level
- 1a. info at ML 1b. ML to FL
- lb. ML to FL
- 2. Functional level
 - 2a. Info at FL
- The linking pro
- Errors in children
- 3. Positional level
 3a. Info at PosL
- PosL to PhonL
- 4. Phonetic level
- 4a. Into at PhL
- 4b. PhL to ArtL
- Motivation for syllables as units of representation

Bibliography

(a) Liaison (epenthesis)

```
Beer and chips \rightarrow bia fan tſip s...

CVV CVC CVC C....
```

Why are you sad? \rightarrow war \mathbf{j} a: ju: sæd CVV \mathbf{C} V CVV CVC

10 - Sentence Production Models

Nick Riches

- 1b. ML to FL

- 2h El to Posl
- 3a Info at Post

- 4h Phl to Artl
- Motivation for syllables as

units of representation

(b) Resyllabification

A book \rightarrow ...ə buk ...V CVC

An elephant \rightarrow ... \Rightarrow **n**e fant ...V CV CV CVCC

10 - Sentence Production Models

Nick Riches

- 1b. ML to FL

- - 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)

10 - Sentence **Production Models**

Nick Riches

M	5 0	l se	ent	. p	rod

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

The linking problem

- 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

ワ	ラ	ヤ	マ	/\	ナ	タ	サ	カ	ア
wa	ra	ya	ma	ha	na	ta	sa	ka	a
	IJ		111	٢	=	チ	シ	+	イ
	ri		mi	hi	ni	chi	shi	ki	i
	ル	ュ	ム	フ	ヌ	ッ	ス	ク	ゥ
	ru	yu	mu	fu	nu	tsu	su	ku	u
	レ		У	^	ネ	テ	セ	ケ	エ
	re		me	he	ne	te	se	ke	e
ヲ		3	Ŧ	ホ	1	+	ソ	П	オ
wo	ro	yo	mo	ho	no	to	so	ko	o

10 - Sentence Production Models

Nick Riches



1b. ML to FL

- 4h Phl to Artl Motivation for syllables as
- units of representation

REPRESENTATION (Garret's stages)

events, focus / tense + aspect

PROCESS

MFSSAGE-LEVEL REPRESENTATION

FUNCTIONAL-

LEVEL

REPRESENTATION

POSITIONAL-

LEVEL

REPRESENTATION

PHONETIC-

LEVEL

REPRESENTATION

ARTICULATORY

-I FVFI REPRESENTATION



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

[DET] woman cue [AUX-be] grv [+ PROG] VR [DET] flagwa [+ PL] [PREP] [DET] box OBLOW

ðə**WU**mənız**gı**vın ðflauwəztəðəbəi

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

instructions

UALISATION Choosing participants, CONCEPTperspective, givenness,

Levelt's Major Stages

FORMULATION

ARTICULATION

Retrieval of lemmas & associated argument structure. Process of thematic role assignment.

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

ERRORS

Get out of the clark!



I love to do iigsaws (crosswords) I don't want to iump 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 hackses of hoves Terry charts Leading list Reading rist

Stammering?

10 - Sentence Production Models

Nick Riches

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 leve

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

3. Positional leve
3a. Info at PosL

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

Nick Riches

min ex.

Mods of sent. prod

Message level
 info at MI

1b. ML to FL

2. Functional level

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

The linking pro

. Positional lev

3a. Info at PosL PosL to PhonL

. Phonetic level

a. Info at PhL

4b. PhL to ArtL

Motivation for syllable

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