# BBN–ANG–183 Typography Page layout

#### Zoltán G. Kiss & Péter Szigetvári

Dept of English Linguistics, Eötvös Loránd University

aim

working in academia



## working in academia

- publishing (a lot of) papers
- theses
- research: scientific journals and books
- needed to evaluate you (appraisal)

## working with publishers

- publishing papers in journals of established publishers
- working in academia = working with publishers
- you will have to know how they work, what they expect from you - and they expect a lot of typographical knowledge from you!

## people you may be in contact with at a publisher

- editor: responsible for the overall content, quality of papers, relies on the evaluation of reviewers
- proof-reader: responsible for the language (grammar, accuracy), stylistic consistency
- typographer/technical editor: responsible for the form and visual content of the publication
- (product manager: financing, contracts, ads; printer)

## working with publishers

- publishers expect you to be fully responsible for your content
- but also for the form of your publication
- this course is about the typographical form of your publication that satisfies publishers

## from manuscript to publication

- ▶ manuscript → publisher → camera-ready to printer/e-book/online
- 1. publisher does it all, manuscript contains basic formatting
- 2. publisher provides stylesheet the manuscript must follow, but they create the camera-ready version
- 3. author does it all, including camera-ready version
  - 2. is the most common but 3. occurs, too

### aims to achieve today

- a general overview of terms, ideas of layout:
  - raw material of publishing
  - page sizes, proportions
  - optimal arrangement of document elements within page
  - grids
  - page "colour": spacing of text elements

#### 3 basic considerations for the design of a publication

the selection of typefaces/fonts

- based on general guidelines for legibility, readability, printability, genre, etc.

- the compositional arrangement of page elements = layout
- the method of distribution (printed, electronic, book, brochure...)

today...

we are going to focus on layout

## an example specific workflow

#### suppose the publisher ...

- wants a camera-ready manuscript from you
- on a stock paper A4
- and plans to publish it in a book of size "B/5"
- ▶ with a "measure" of "22 × 31 picas"

## general workflow

the general process of setting up one's own page layout

- (paper type)
- stock (e.g., "A4")
- page size (book shape) (e.g., "A/5")
- trim the stock to the size of the page size  $\Rightarrow$  crop marks
- design the layout of your manuscript within the boundaries of the trimmed page size

## page size: shape, proportions

#### the shape of books

- usually rectangular
- exceptions include children's books, and a book on epitaphs



#### page proportions



- the ratio of the height (h) to the width (w) of a rectangle
- some proportions seem to be more pleasing to the eye than others
- tall shapes lead the eye downwards and easier to hold
- the same proportions pop up in many cultures (and nature!)

# ?

what are the most common traditional page (& textblock) proportions?

## page proportions

#### factors

- aesthetics
- tradition
- current industrial (standard) sizes

# the square "unison" (1:1)



## the square "unison" (1:1) — CD booklets



#### common page proportions



#### page (& textblock) proportions: tradition & current standards

<b>proportion</b> $(w : h)$	corresponding standard
1:2	—
3:5 (1:1.667)	a <b>US</b> la rel ak est (1 · 1 647)
$1: \varphi$ (1:1.618)	$\approx$ <b>US</b> legal sheet (1:1.047)
2.2(1.15)	$\sim$ ISO (1 · · $\sqrt{2}$ /1 · 1 414)
2.5 (1.1.5)	$\approx$ 150 (1 · $\sqrt{2}$ /1 · 1.414)
3:4 (1:1.294)	pprox US letter sheet (1:1.294)
1:1	CD booklets
5:4 (1:0.8)	pprox US landscape letter (1:0.773)
	proportion $(w : h)$ 1:2   3:5 (1:1.667)   1: $\varphi$ (1:1.618)   2:3 (1:1.5)   3:4 (1:1.294)   1:1   5:4 (1:0.8)

#### some properties of ISO standard A series paper sizes

- $A0 = 1 \text{ m}^2 (1189 \times 841 \text{ mm})$
- the series has the proportion  $\sqrt{2}$ : 1
- all its members are reciprocal with themselves

#### some properties of ISO standard B series paper sizes

- larger than A0: 1400 × 1000 mm
- slightly less reciprocal than A series

## ISO A series paper sizes



#### the ISO vs. America

- the ISO standard for paper sizes is widespread except in the US and Canada
- the most commonly used sizes for everyday activities are:
  - letter size (8.5 × 11" (inch), 216 × 279 mm) slightly wider and smaller than A4
  - legal size (14 × 8.5", 355.6 × 215.9 mm) slightly wider and taller than A4

# and now, a brief maths detour

## the golden section & Fibonacci series

#### four special irrational numbers

- ▶  $\pi = 3.14159...$  —the circumference of a circle whose diameter = 1
- e = 2.71828... the base of natural logarithms
- ▶  $\sqrt{2} = 1.41421...$  —the diagonal of a unit square
- $\varphi = 1.61803...$  the golden section/ratio

#### the golden section

- also called: "extreme and mean ratio" (Euclid), "the divine proportion", "medial section"
- two elements embody the golden sec. when the ratio of the larger to the smaller is the same as the ratio of the sum of the two to the larger



• 
$$\varphi = \frac{b}{a} = \frac{a+b}{b}$$
  $(a > b)$   
•  $\varphi = \frac{(1+\sqrt{5})}{2} \approx 1.61803...$ 

named after Phidias (5th c. BC); used it in his sculptures

## golden ratios in the Parthenon



#### the relationship between $\varphi\textsc{,}$ rabbits and sunflowers

- Leonardo of Pisa ("Fibonacci"), in: Liber Abaci [Book of the Abacus], 1202:
- "How many pairs of rabbits can be produced from a single pair in a year? Assume that (1) each pair produces a new pair of offspring every month, (2) a rabbit becomes fertile at age one month, and (3) no rabbits die during the year."
- 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, 610, 987, 1,597 ...
- this is the Fibonacci series
- the ratio of any adjacent pair of terms oscillates around φ (= 1.618...), approaching it ever more closely

#### the golden section/"perfect" proportion often used in typography

- page sizes
- textblocks, margins
- font size changes













## tablet/mobile devices & the golden ratio



#### http://gold3nratio.tumblr.com/

gkz & szp (delg)

## Fibonacci spiral in photography: detail vs. space



## Fibonacci spiral in web design: 'content clustering'



http://www.hongkiat.com/blog/golden-ratio-in-moden-designs/
### Fibonacci spiral in fight scene



### Fibonacci patterns in sunflower floret spirals



# Fibonacci spiral in a nautilus shell



### Fibonacci spiral in clouds



### Fibonacci spiral in cats



### Fibonacci series in font size changes

#### font sizes

- 5, 8, 13, 21, 34, 55, 89 ...
- more versatile: 5, 6, 8, 10, 13, 16, 21, 26, 34, 42, ...

# stock page size $\neq$ trimmed book size



### A5 stock—A/5 book size

A5 paper (148  $\times$  210 mm)



# B5 stock—B/5 book size

B5 paper ( $176 \times 250 \text{ mm}$ )



# Lorem Ipsum

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Donec metus tortor, vestibulum vel ultrices ut, faucibus id arcu. Aenean condimentum euismod felis quis sollicitudin. Ut ac nulla vel enim tristique euismod. Curabitur porta lobortis tellus, non pulvinar tortor mattis non. Sed bibendum risus ac risus.

textblock trimmed size

bleed area

🛰 slug area



### layout areas for printing

#### textblock

the area for the text (and pictures, etc.)

#### trim area

- the distance between the textblock & edge of trimmed page
- the textblock + margins
- shown by crop marks

### layout areas for printing

#### bleed area

- area that goes beyond where the paper will be trimmed
- artwork and background colors often extend into it
- indicated by bleed marks

#### slug area

area that will never be printed after trimming; outside bleed area
may contain printing or color information, or display other instructions for the printer



### specifying bleeds & slug in an application

Numb	er of <u>P</u> age	es: 1	🔽 Facing 🗌 Maste	<b>Pages</b> r Text Fram	ie	OK Cancel
Page <u>S</u>	ize: B5		•			
Wid	th: 170	6 mm	Orientat	tion: 🔝 🛛	а	Fewer Options
<u>H</u> eig	ht: 🗘 251	0 mm	onuncu		<u>1</u>	
Bleed a	ind Slug					
	Тор	Bottom	Inside	Outside		
Blee <u>d</u> :	3 mm	3 mm	3 mm	3 mm	8	
Shuar	7 mm	7 mm	7 mm	7 mm	ത	

#### some standard stock and trimmed book sizes

press sheet size (mm)	stock	size (mm)	trimmed book size (mm)
841 × 1189 (=A0)	A4	210  imes 297	A/4: $202 \times 285 \pm 2$
	A5	148  imes 210	A/5: 142 × 197±2
700 × 1000 (≈B1)	B4	250  imes 353	B/4: 243 $ imes$ 336 $\pm$ 2
	B5	176  imes 250	B/5: 168 × 238±2

press sheet/broadsheet = 'nyomdai nyersív'

### length in press sheet in the colophone

A kiadásért felelős az Akadémiai Kiadó Rt. igazgatója Felelős szerkesztő: Siptár Péter Termékmenedzser: Hesz Margit Fedélterv: Starkiss Stúdió A számítógépes szerkesztés Győrei D. László munkája A nyomdai munkálatokat az EFO Kiadó és Nyomda Kft. végezte Felelős vezető: Fonyódi Ottó Budapest, 2003 Kiadványszám: KMA2-105 Megjelent 54,7 (A/5) ív terjedelemben

#### press sheet

- in Hungarian books (colophone) the length of a book is given in press sheets
- one press sheet = 16 pages
- the standard is to measure in A/5 pages
- if a book is printed on A/5 trimmed size, its length  $= \frac{p}{16}$  A/5 sheets
- e.g.: if your book is 512 pages long, its length is  $\frac{512}{16} = 32 \text{ A/5}$  sheets

#### press sheet

- what if the size is B/5 and not A/5?
- A-series stock is larger than B-series stock by 1.43 (e.g., A0 = 1m<sup>2</sup>, B1 = 0.7m<sup>2</sup>)
- ▶ if a book is printed on B/5 trimmed size, its length =  $\frac{p \times 1.43}{16}$  A/5 sheets
- ▶ if your B/5 book is 612 pages long, its length is <sup>612×1.43</sup>/<sub>16</sub> = 54.7 A/5 sheets

#### now we know the trimmed book size, what's next?

create the textblock (or: typeblock, type area, live area) 'tükör', design its optimal horizontal and vertical length

grids

- ▶ position the textblock within the book page ⇒ this creates margins around the textblock
- we add place for the optional satellites: footer and/or the header, and the marginal notes
- essentially thus we divide the available space of the page into grids (frames)

### grids in typography

- essential part of page design
- give underlying structure and consistency to a document
- grid structure must be balanced and orderly
- most professional DTP applications (QuarkXpress, InDesign) rely on grid structure

### main grid types in typography

- column grids: simple publications, books, vertical designs
- modular grids: more complex designs, vertical-horizontal designs; rectangular modules for content

### an empty, unstructured trimmed spread



### grids: structured trimmed spread

### grids: structured spread

# grids: underlying structure, consistency



### elements of a recto page



gkz & szp (delg)

### elements of a recto page



### elements of a recto page: satellites



#### inside and outside the textblock

- header & footer: usually not counted in the size of textblock (unless it contains only the folio, but that's rare)
- footnotes: always part of textblock
- marginal notes: never part of textblock

#### what can the header/footer contain?

- its main task is to be a nondisturbing index
- the folio: usually at the fore-edge margin, same pointsize as the text, avoid bold or italic or colour
- nothing else: if the book is not a collection of different articles
- author: usually in header and on verso page; often abbreviated, smaller size than main text, often in italic
- title (of chapter or section): usually in header and on recto page; often abbreviated, smaller size than main text, often in italic

### example header: folio, author, title

#### 168 Gordeeva and Scobbie

Maddieson 1996). Generally, the terms 'breathiness', 'aspiration' set whisper' relate to urbulent flow of air passing through the abducted gene (Laver 1994: 189-190; Stevens 1998: 428). However, since the urbulent flow produced at the glottis is inseparable from the sympton composite varying in the precise combination of a glottal opining and gradient supraglottal constriction shaping the turbulent flow (Kim 1998 111; Ohala and Solé in this volume). The composite source-filter view of aspiration noise is helpful in explaining the notorious variety of phonets to palatal fricatives [c], see e.g the overview in Silverman 2003; as well as in explaining the difficulty of assigning exact phonetic labels as preaspiration based on supraglottal characteristics.

Across languages and varieties, preaspiration can be 'normative' (a tum introduced by Helgason 2002): i.e. a consistent characteristic, as in leclandic (Thráinsson 1979), where it seems to be a major correlate of phonological contrasts exhibited by pairs like /viht/ ("wide") vs./in ("breadth"). Scottish Gaelic exhibits subtle dialectal variation in /pt/ (Ø Murchú 1985; Bosch 2008), varying from no preaspiration in the Easem and Southern periphery. to the presence of clear preaspiration [hp ht bb]

#### Preaspirated voiceless fricatives in Scottish English 169

from the human auditory system that negatively influence its perception (Bladom 1986). However, such considerations are not strong enough to mean that preaspiration cannot be a significant part of a language's highlevel phonological system. Just on the perceptual side of hings, speakers of the languages with /NeC/ sequences, such as Turkish and Anabie (where *hu* is a phoneme rather than obligatory intersegmental transition) are better attended to the presence of [h] than speakers of English of Persch tacking segmental /VhC/ phonotactics (Mielke 2003). These considerations make close phonetic examination of comparable or more arguable cases o language varieties with unstable non-normative preaspiration a ve worthwhile research strategy, especially if the phonetic underpinnings this phenomenon and its functions are to be understood, as well as influence of more general processes of co-articulation on synchronic diachronic sound change (Ohala 1981, 1993; Ohala and Sole in volume).

Most accounts of 'non-normative' preaspiration have so far cons preaspirated stops (e.g. van Dommelen 1998; Helgason 2002; Sch 2005). While there are phonological contrasts with word postaspirated voiceless fricatives reported in language like e.g. B (see discussion in Vaux 1998), there have been no reports of Domative prospiration for fricatives. The possibility of pres

### what size should the textblock & margins be?

#### considerations

- industry standards
- historical proportions
- practical issues: place for the thumbs, consistency of lines, glued or bound book, etc.

industry standards: textblock sizes

book size & corresponding textblock size

Trimmed book size	Typical textblock size		
A/5 (142 $ imes$ 197 $\pm$ 2 mm)	$110 \times 155$ mm		
B/5 (168 $ imes$ 238 $\pm$ 2 mm)	$123 \times 185 \text{ mm}$		

### textblock & margin sizes in a B/5 book (mm)



### textblock & margin sizes in a B/5 book (mm)


### copyfitting

# font width affects textblock size

- optimal horizontal size of textblock (measure): for a single column text: 60 to 70 ( $\pm$ 10) characters per line
- ▶ widths of characters in fonts are not uniform → optimal length varies from font to font



copyfitting: finding the optimal textwidth for a given font

### copyfitting method

- 1. measure the length of the lowercase alphabet (without accented characters) of the given font: abcdefghijklmnopgrstuvwxyz
- 2. use a copyfitting table to find out optimal measure of the line length
- 3. e.g., if the length of the alphabet is 145 pt, the optimal measure should be between **26–28 pc** (109–119 mm):

### AVERAGE CHARACTER COUNT PER LINE

					. 0						20			26	28	10	
	10	12	14	10	18	20	22	24	20	20	30	32	34	30	30	40	
80	40	48	56	64	72	80	88	96	104	112	120	128	136	144	152	160	Read down,
85	38	45	53	60	68	76	83	91	98	106	113	121	129	136	144	151	in the left
90	36	43	50	57	64	72	79	86	93	100	107	115	122	129	136	143	column:
95	34	41	48	55	62	69	75	82	89	96	103	110	117	123	130	137	lowercase
100	33	40	46	53	59	66	73	79	86	92	99	106	112	119	125	132	alphabet length
105	32	38	44	51	57	63	70	76	82	89	95	101	108	114	120	127	in points.
110	30	37	43	49	55	61	67	73	79	85	92	98	104	110	116	122	Read across,
115	29	35	41	47	53	59	64	70	76	82	88	94	100	105	111	117	in the top row:
120	28	34	39	45	50	56	62	67	73	78	84	90	95	101	106	112	line length
125	27	32	38	43	48	54	59	65	70	75	81	86	91	97	102	108	in picas.
130	26	31	36	41	47	52	57	62	67	73	78	83	88	93	98	104	
135	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
140	24	29	34	39	44	48	53	58	63	68	73	77	82	87	92	97	
145	23	28	33	37	42	47	51	56	61	66	70	75	80	84	89	94	
150	23	28	32	37	41	46	51	55	60	64	69	74	78	83	87	92	
155	22	27	31	36	40	45	49	54	58	63	67	72	76	81	85	90	
160	22	26	30	35	39	43	48	52	56	61	65	69	74	78	82	87	
165	21	25	30	34	38	42	46	51	55	59	63	68	72	76	80	84	
170	21	25	29	33	37	41	45	49	53	57	62	66	70	74	78	82	
175	20	24	28	32	36	40	44	48	52	56	60	64	68	72	76	80	
180	20	23	27	31	35	39	43	47	51	55	59	62	66	70	74	78	
185	19	23	27	30	34	38	42	46	49	53	57	61	65	68	72	76	
190	19	22	26	30	33	37	41	44	48	52	56	59	63	67	70	74	
195	18	22	25	29	32	36	40	43	47	50	54	58	61	65	68	72	
200	18	21	25	28	32	35	39	42	46	49	53	56	60	63	67	70	
210	17	20	23	27	30	33	37	40	43	47	50	53	57	60	63	67	
220	16	19	22	25	29	32	35	38	41	45	48	51	54	57	60	64	
230	15	18	21	24	27	30	33	36	40	43	46	49	52	55	58	61	
240	15	17	20	23	26	29	32	35	38	41	44	46	49	52	55	58	
250	14	17	20	22	25	28	31	34	36	39	42	45	48	50	53	56	
260	14	16	19	22	24	27	30	32	35	38	41	43	46	49	51	54	
270	13	16	18	21	23	26	29	31	34	36	39	42	44	47	49	52	
280	13	15	18	20	23	25	28	30	33	3 35	38	40	43	45	48	50	
290	12	15	17	20	22	24	27	29	32	34	37	39	41	44	46	49	
300	12	14	17	19	21	24	26	28	3 31	33	35	38	40	42	45	47	
320	11	13	16	18	20	22	25	27	2 2 5	31	34	36	38	40	43	45	
340	10	13	15	17	19	21	23	25	5 27	7 25	32	34	36	38	40	42	
360	10	12	14	16	18	20	22	24	1 26	5 28	30	32	34	36	38	40	

page elements copyfitting

kz & szp (de

/po/page lay

75 / 86

### Some examples of page designs/grid structure:

### Historia naturalis, N. Jenson, 1472



## R. Bringhurst: Elements of typographic style, 2005



gkz & szp (delg)

### typo/page layout

#### example

## Biblia Polyglotta, C. Plantin, 1568, 5 languages



# The Illustrated London News, 1861

	Tex, s, ten.)	THE ILLUSTRATE	D LONDON NEWS	677
1	HOSPITAL IN CONSTRUCTION and	PLATE-A. R. MATTER and SOM	THER DEPENDED, WHOS COMPANY, HA	Horseson inter reputrient-
1	the state of the s	the first of the second	The Revision Production of the Workshop	And spinst of the same solution statistics where the
ł	T ORDOR ECHOROPATERS ECHIPTEL,		EAGOR TH. This Post PALE MANTE.	being which has been and with shares a being the set of
	APPROPRIATE PROPERTY AND DESCRIPTION OF AN AD	NEW CONTRACTOR	the state wanter the state of t	Contract Statistics, Printer Statistics of the Automatic Statistics of the Statistic
	Brink-The Tota Ban, Kapitan, Santan,	(Eleration ) ( Charges, 1)	KISARANE IA WARREN & COOPAR	Contra a fin in or hand it conto and that includes
	Rotat addition of all access accurry	A state of the sta	States and the second s	superior better serves a boy just all grad
	Her Barlan P West St. same bart and this art.		Reserve of the Article state Spectra & dist.	COURT ROCERTON PUBlis of Anti-
	The Volume Line of the Line of the Line of the	End on any der straffe Alexander of an Angel	The space grant will a said or spice but have	The of femalest count. In all for woman, which
	STREET TOTAL OF STREET, Building out		the next optimal and hereits of any state of the same and	GARREN MODESING
	A. State Physics, et al. Spin wright, State	the state of the second state of the state of the second state of	"North State of the State of the State of the	Manual Advanced And Advances in the Owner, and
	States and date in the state. If you shall	GARDONES' LARPS are the BEST-THE	The budget of the owner with the second second	state of the particular of the
	NAZAL, both AtlaDo LONDON	British and July Barries	O'state FEFALLE CER	M. R. W. R. R. R. Rabbinski ( 233, 1, 1, 1) Waharlast
	AND CONTRACTOR CONTRACTOR	A BOAR STARL &	PLOCE, to any part of London from hos that	LINERT WOOLSEYS
	a state of the second	O Man Auffangen der Beiser ber Berner bei der angestendenten Berner ber erstendenten Berner ber Berner bei der Berner ber	States of the local division of the local division of the	The state of the second
	Dates, her June, San II 191	Witness of the Arrival Party of the Party of	As bool-making word, strong and	D' LIVIET LAND AND A DESCRIPTION OF THE REAL PROPERTY AND
	B PRIMATION - RACEMENTS ATLL -In a	Watching Transport of Streams, Bulleters	HONGOPASEIO COCOA	has diving a source candidate strategies in plan.
	Party line, such down that the same	And instantial Resident for Street, and Joseph Street, And	EPPISCOCOA.	A VIII ALLOS PATTICOATS-
	NAME AND POST OFFICE ADDRESS OF TAXABLE PARTY.	Street, in other than the second state of the	Hamana militile menan	States and the set of the states of the set
	Party local in the spinster of spinster of the spin strength of the spin	Prop. Map where it using fight and, time out	TUBLAND MONE COCCA	Lander Internet
	State of the second sec	Witness of the second s	INTEL COLOR	and S.R. Statistics of Links of Links
	RECEPT LESSON Coring the Melidique	NAME AND ADDRESS OF AD	W Distances when a subscript of some set of the set of	N that of the local states and the second states
	Another Descent, in word Parcel for Size of the Contraction of the Contract of	and the second s	The state of the second	This risk of the A Logenson & Non-Li-
	THE INCO DELING ASSOCIATION IN.	J. MATLE and CO'S FIRST CLASS	Westergen un für Plagte für Kalten	A sea to design in the same second se
	States of the second second a subset	· · · · · · · · · · · · · · · · · · ·	G hard solg agent room - D	Statement of any pair date that has been been
	The second secon	Constant March 1	The second secon	A PICKY PARTS FOR FILMER
	Hard of the second second second second	And the Question Stationer Stationers, Sta	and a set of the set of the second	LARGE SALERFOOD TO BE CLOSED
	"Manual Vision Start, Starter Station Tonis, Stat.	DIRING and BOYAIRO BIOR	The of the second secon	An Taxaba No. 12 (Property Streams
	T OCLATICE SEVIED-WATHINGS	State of the state	the second second in the second second in the second secon	TAXES SPECIE and OL. In Strend by
	ALL DESIGNATION OF THE OWNER	Revenue of the local division	MADE TO AND THE STREET, IN STREET,	No. of Concession, Name and Address of Concession, Name and
	Distant of the second second beauty of	T	Spining of the local division of the local d	Englands and the state of the
	STWEET, Strill 1988 - Proble Look-stady	· M. Control Chinese	which there is \$1.12.14, which is and in these	A 1 March All restrict the first time with they leave at the leave of
	Filt Street and a sublimited	RAFLE and CO. for CARPERS and	and the property of the second	And the survey of the set of the set of periods in the set of the
	W. F. TROMAS and DO.S. PATENT	CATTOR-SETT APART ANTINA	Thereine, C., Start, C., Bank, S., Karlins, S.,	Twenty between the
	and the second second second second	and the second state of th	B manyout to protify a far with a single farmer of the second sec	Character Distances of the statute of the statute of the
	Strategies and a state of the state build	Which have all first, buy and of a local of a possible of the	State of the second sec	in the second seco
	STRING and BEBROIDERING	the of the house of the second	A STREAM STRUFTLO-DATURA PATELS.	BASING DEBODAUPATTER
	The second secon	which is not a set of the local data where the set	State of the lot of the lot of the	an \$220,00051,000-000
	The state is from party one of the state of	BILL PURSTICES THE DELL-	Distances Review, Spinster, Spinster, all C.	Canada de antes de la Filipera
	MOURAGES PRESSARY a bose and	To have not a constrained with the local and the local of the local state of the local st	Radon will all the same at un family in the first	MARRIAGE OFFICE
	And and when it is not only strends in the second strends when the second stre	MANDAR & CORES and CO. 34 Motion-	STA 1. MURANY PATERY FLUE	Spatial with some start with a start of the source of the
	WALLARD FILTER AND OF BALL PLATES.	Fit official states and a life to the billion of the life states where the life states are stated as a state of the life state of the life states are states and the life states are states are states are states and the life states are	Restort all of a light a horse	TARIES' RIDINO TROUBERS
	NAMES OF TAXABLE PARTY AND ADDRESS OF TAXABLE PARTY.	WALNOT SUITE DRAWING . BOOM	LIGHT.SLOWN COO.LITES CO.	the line of the li
	Research & State & State of Concession, Street, or other State of Concession, Name of Street, or other State of Concession, or	and have a present of the birth	or part and and a second property linear	Publis, Sibixe Replice
	BRITES TOT BALL YOR LIGHTERS	FORMATION PROPERTY AND ADDRESS OF TAXABLE	In some of the local sectors and the	SCREWENCELINE
	Story Louise, 41, 1994 of our marking Louise of the second line of the	F T Bulled and a s	NAME & DESCRIPTION OF THE REAL PROPERTY AND ADDRESS OF THE PROPERTY ADDRESS OF THE PRO	A strength for many real families of the first for the start of the st
	TADIES' OFF SIXOS-A boutte	Brann Brann Brann Brann	with the second	THE DUPOTORS VERSES AND
	A PARTY RATE TO A PARTY OF A PARTY OF	PURSTAILE VALUEDORS, et. 75, 11,		And in modeling they all even to be a be
	A strend of the set of		The Local Annual Social States Propint Inc.	THE ODDATEST SOTILIT of the BAR
			Statute house and the past in the sec of	(180 Berlin without - build - build
	NUPELING and REDADCER IN	wanted with the state with an end of the state of the state	and the second second of the second s	These shares a second by the second s
	The little has been the little bar has been been been been been been been bee	Hal and SON'S REDERED BY OFTLYS.	Area, Bowers, and S. C. Reed, Lonin, W.S.	
	DISTS CERCONSISTERS, WARNING.	in the second se	GROOTEN of the SECONDER INC.	OCUMENTS FOR CANADA
	Alle Will, This and Channess hims is used appli-	A WARD OF THE AREA AND AND AND AND AND AND AND AND AND AN	Mary side surgers of the state of the surgers	And the second s
	PRODUCT STATUTE OF THE PARTY OF	WAIRING PRESERVO, MASSILINE.	CORFA-LOIFOR INPASSAD	CLOSED OTTATL - Galand Parad
	Allow C. Sandhart of Street of Street	the set of the local division of the local d	Solumber, & state is supplied as a diriy of the	STREET TOLDERS Westmann. W.
	No. that the ter of fine to the logs of the	AND REAL PROPERTY AND ADDRESS OF ANYON.	CLEAFIELD PATENT STALCH	And a state of the state of the state of the

gkz & szp (delg

#### example

### two-column grid: Journal of the Acoustical Soc. of America



FIG. 7. The short-time power (STP) encodated over the medium term (hep.  $M{\sim}32$  me) and the short term (bettern,  $M{\sim}8$  mi) for the decomposed components from 42 by subject P2: (black) harmonic  $P_{\mu}$ , and (thin) inharmonic  $\rho$ 

reduced appropriate (=-6 dB), with the shorter windows<sup>2</sup> free acts comparison of the STN, we set M to a constant and and a limiting windows:  $(w) = (1 - w_0) 2 \operatorname{work}(M)$  for  $w = (2) (1, \ldots, w - 1)$ . In the present andly, we were interacted in framework the short M and M are designed for metarrowing models M and M are designed for metarrowing M and M

#### B. Observations of [oz:]

Speech example #2, the vowel-fristative transition [or:] produced by subject PJ, was decomposed by the PSHF and the STPs were calculated. To observe short-term variations, the window length was set to the mean period,  $M = \{T_0\}$ : medium-term variations over the length of the utternee, the window length was set to four times the mean period,  $M = 4(T_0)$ .

The resultant STPs are plotted in dB in Fig. 7. The difference between the harmonic and anharmonic medium-term STP trajectories (top) is the short-term HNR which, besides voice onset, shows a noticeable change at about 400 ms at the transition from yowel to frigative. Indeed, after voicing has realed toward the beginning of the yorkel (at about 160 ms), the harmonic amplitude dies away, reaching a maximum decay at the transition (ca. 400 ms). After some overshoot and subsequent fluctuations it returns to a steady value (cz. 700 ms). The anharmonic component grows during the development of the fricative (380-500 ms), undergoes a period of oscillation (500-660 ms), and finally settles down to a reasonably steady value. Note that the fluctuations of the two components at the start of the fricative are roughly equal and opposite. The initial period fluctuations at voice onset cause errors in the harmonic estimate, which get replicated,

1426 J. Acoust. Soc. Am., Vol. 108, No. 4, October 2000



In negative, in the anhaemostic estimate, Otherwise, the HNW is a least > 10 dB in the vowel, rising to mere thus > 20 dB at the steadest point (around 200 ms). In the firstnew, values range from > 30 dB to > 10 dB, scattly go about > 4 dB in the fully established pert. The short-own STP curves (Fig. 7) thousand, which were compated using the stagic-perturb at our classifier of the stage perturbative stage of the stage

#### C. Pitch-scaled demodulation

In order to quantify the oscillations in STP, we calculated their magnitude and phase by complex demodulation of the logarithmic signals ( $\log_{20}/R_{e}$  and  $(\log_{20}/R_{e})/R_{e}$  (defined in Eq. (6)). We took pitch-scaled frames of the signal, as for the PSHF ( $N = 4T_{ee}$ , fixaring window w), and extracted the first hermonic,  $f_{ee}$ :

$$t_{\gamma}(p) = \frac{10 \sum_{n=0}^{N-1} w(n) \exp\left(\frac{-/8 \pi n}{N}\right) \log_{10} P_{\gamma}\left(p + n - \frac{N}{2}\right)}{\sum_{n=0}^{N-1} w(n)},$$
(7)

which provided the outputs  $P_{\mu}(\rho)$  and  $P_{\mu}(\rho)$  is complex Fourier coefficients, ruber than as reconstructed singleharmonic signals. Implicit in the demodulation nanlysis is the sumergined that the turbletree-on-bioscore is multiplied by seems signal that is related to the voltation of the vocal biolis, model as a first order approximation, and entrate reliably the phase of the principal mode, that at the fundamental frequency.

The modulation amplitudes are shown in Fig. 8 (top) and the relative phase (bottom). The modulation phases, which continually seate at approximately the findamental frequency  $f_0$ , are unwrapped and then subtracted from each other to form the phase difference between the modulation of the harmenic component and the modulation of the anther-

P. J. B. Jackson and C. H. Shadle: Modulation of voiced fricatives 1426

example

# modular grids (Emil Ruder: *Typography*; 1967)



gkz & szp (delg)

### typo/page layou

### Phaidon, catalogue, 2003



gkz & szp (delg)

### Form + Zweck, journal, 1995

itektur

The second secon

between the section of the sectio

### L. Antal: A formális nyelvi elemzés, 2005

### A magyar esetrendszer

Velemingrees varante sainadunk nydvinadomianian obsi tiadatas az egytekető servős rendszerek objekté elementekete adómian az egytekető servős natlátis, amelynta formanikati a adómiátas a Szovijennös Tomos Adokanisijas az elemin komparater, hegy az interi rendszelősil, a finom feren a adómiátas menteketetes eleminet a szovijentekete adomiátaszam Adokation eleminet adokatori a szovijenteket adomiátaszam Adokator a her melyeketőszt, agyetete adokator aktépiszen nem is kelt mindezkiken egyetetettet, agyetet adokator aktépiszen kelt angyetetetes adokator adokator

More alingle units are long a markete analysis identifies a K. razard methodomolysiska, for distance Vapar, e mail for the second second second second second second second and the electronic areal a single limitiation, how ye way the second second second second second second second second analysis of the second second second second second second analysis of the second second second second second second analysis of the second second second second second second analysis of the second second second second second second analysis of the second second second second second second analysis of the second second second second second second analysis of the second second second second second second and the second second second second second second second and the second second second second second second second and the second second second second second second second and the second second second second second second second and the second second second second second second second and the second second second second second second second and the second second second second second second second and the second second second second second second second and the second second second second second second second and the second second second second second second second are second second second second second second second second second are second second second second second second second second second are second second second second second second second second are second second second second second second second second are second second second second second second second second are second second second second second second second second are second second second second second second second second are second are second second

ramoi isra, greinelmän a leito nychéższet nagoobbrészet mág csak spo modkzertani forgisa még kevés van, s meglepően kesi sz e metodá alspiska, cgy-sgy konkrát nyckú problemá féldolgozó monogifi assem. Téhá szein, nem elvi-érdemi, hanem "napirend" megosá lisbót sarujuk fontosabbnak, pontosan szizadunk legsingetőb fő Bevezet

nim openie za statu na posta n ubat itindulási alapot a nyelvtudománynak, mert ez ad kiindulási alapot a nyelvtudománynak, negenineti, megineti munka addig, amíg egy meghatározott korbeli nyebell apont ingete ingete a történetét kutassukl (BLOOMFIELD 1933: 19) More szoras, - 19 Most 2010 - igéretűnknek megfelelően – átadjuk a szót a leiró nyelvészet egrik anti kípviselőjének, s ezzel a leíró és történeti nyelvészet viszonyára vonatand gondolatmenet elso pontját lezárjuk. "The greatest use of such explicit meturil descriptions will be in the cataloguing of language structures, and in de outputing of structural types. These descriptions will, however, be also irrortant for historical linguistics and dialect geography, far the relation of language to culture and personality, and to phonetics and semantics; and for the comparison of language structure with systems of logic." (HARRIS, 1951: 3) Each után egy még nehezebb kérdést kell szemügyre vennünk: Egzitalin lehetséges-e történeti előzményekre tekintettel nem levő sintrorikus leírás? Céloztunk már arra, hogy egyesek ennek puszta kreó hatalmas vitairodalmat nem fogjuk elősorolni. Ez a vita, amelytek nagy részét a szinkrónia elleni támadások teszik ki, tudomásom Intrint a harmineas évek elején vette kezdetét Wartburg egy tanulmátjural (WARTBURG 1939). A kérdés taglalása napjainkban is folyik,

239

### sample exam questions

Which is never part of the textblock?

- 1. footnotes
- 2. marginal notes
- 3. footer
- 4. folio

The printed area of the page that extends outside the cropped page is called

- 1. bleed
- 2. slug
- 3. press sheet
- 4. satellite