L. Varga: BMA-ANGD-CNy4.01 The Phonology of Intonation and Stress in the English Sentence. Spr 2017

TWO IMPORTANT THINGS TO DO:
1. Please print out this booklet and always bring it with you to the intonation classes.
2. Please download the Praat program (Boersma & Weenink: *Praat: Doing phonetics by computer*) for yourself, it is available at: www.fon.hum.uva.nl/praat/

PART I. THE TRADITIONAL BRITISH (CONTOUR-BASED) APPROACH TO INTONATION

Unit 1: Preliminaries
Read : Tench 1996, Ch 1, sections 1.1., 1.2., 1.3.

Prosody is the term for those aspects of speech that typically apply to a level above the segments, and so *prosodic features* are also known as *suprasegmental features*, with pitch, loudness and duration being the main ones.

> N.B. 1. *Pitch* is a perceptual (= auditory) category: perceived height of the speaking voice. From a physiological (= articulatory) point of view, pitch corresponds to the *rate of vibration of the vocal cords.* From a physical (= acoustic) point of view it corresponds to *fundamental frequency* (F_0), measured in Hz (Hertz).
>
> 2. *Loudness* is a perceptual category: perceived strength of the speaking voice. Its physiological counterpart is *breath-force*, its physical counterpart is *intensity*, measured in dB (decibels).
>
> 3. *Duration* (length), measured in ms (milliseconds)

Intonation is a part of sentence prosody. It primarily involves the use of **pitch.** Pitch can change according to certain fixed patterns, these variations can be called ***tones***. They can be *level* (= *static*) *tones* with steady pitch, e.g. High Level, or *contour* (= *kinetic*) *tones* with pitch movement, e.g. Fall, Rise, Fall-Rise, Rise-Fall, etc.

> N.B. Warning! The term *tone* is ambiguous. In modern phonology it also refers to the primitive building blocks (either H or L) of contour tones, e.g. HL represents a Fall, LHL a Rise-Fall., see Part ii.

Intonation is the superimposition of tones on strings of syllables in spoken sentences (= in *utterances*). The sequences of tones superimposed on a sentence form units of intonation, called ***intonation phrases*** (= ***IPs***). The tones following one another in the same IP constitute the ***intonation contour*** (= **pitch contour** or **tune**) of the IP. The intonation of a spoken sentence affects the interpretation (meaning, modality, attitude) of the spoken sentence. In (1a, b) there is a high level tone, followed by a falling or rising tone, and while (1a) is a statement, (1b) is a yes-no question.

(1) a. _____ b. _____

|On 'Saturday \morning. | |On 'Saturday /morning? |

> N.B. In some languages, called ***tone languages*** (e.g. in Thai), tones are used as ***lexical tones*** (= word-melodies): they are integral parts of words, e.g. _*kha* 'spice', ¯*kha* 'trade', –*kha* 'herb', *kha* 'kill', /kha 'leg'.We are not dealing with lexical tones because Engl. (like Hung.) is an ***intonational language***, not a tone language, and so it lacks lexical tones.

Intonation is closely related to stress and accent. ***Stress*** is the relative prominence of a syllable achieved by extra loudness (= it is louder than the neighbouring syllables).

Accent is the relative prominence of a syllable which is not only stressed but also pitch-prominent (= it is associated with a radical pitch change, it initiates a tone within an intonational contour).

The English stress system: syllables can be unaccented and accented. The unaccented ones can be *unstressed* or *stressed.* The accented ones can be *prenuclear accented* or *nuclear accented.*

In (1a, b) and (2) there are two accents: prenuclear on *Sat-* and nuclear on *morn-*. The other syllables are unaccented (and also unstressed.) In (3) *what* carries a prenuclear accent, *you* carries a nuclear accent. Among the unaccented syllables *do* and *-night* are stressed, the other syllables (*are, go-, ing, to, to-*) are unstressed.

Internal structure of the unit of intonation
Acc. to traditional British analyses the ***Intonational Phrase*** consists of (Prehead)+(Head)+Nucleus or Tonic+(Tail). (The bracketed parts are optional.)

(2) |*On*   '*Saturday*   *MORN-*   *ing.*|
   [Prehead] [Head   ][Nucleus orTonic][Tail]
   [Prenuclear/Pretonic part][Nuclear/Tonic part   ]
   [IP   ]

(3) | '*What are*   *YOU*   *going to ˙do to˙night?*|
   [Head   ][Nucleus orTonic][Tail   ]
   [Prenuclear/Pretonic part][Nuclear/Tonic part   ]
   [IP   ]

(4) ***Transcription (notation) of intonation:*** by graphic symbols simultaneously indicating pitch contours and accented syllables in traditional British analyses.

F: \σ		R: /σ			
LF: ˎσ	HF: 'σ	LR: ˌσ	HR: ˊσ	FR: ᵛσ	RF: ^σ

Symbols indicating prenuclear accents: High head: 'σ   Low head: ˌσ
(If there is a need, the symbol ˙σ can be used to indicate unaccented stressed syllables, but these are irrelevant from the point of view of intonation, see example 3 above.)

Intonation is systemic, it involves 3 choices
(6) Halliday's (1967) theory of intonation, 3 subsystems, provided by 3 choices:
tonality: a. | I'm going into town this ˋmorning.|
        b. | I'm going into ˋtown | this ˌmorning.|
tonicity: a. | What are you going to ˋdo tonight.| b. | What are you going to do toˋnight.|
        c. | What are ˋyou going to do tonight.|
tone: a. | I aˋgree.| b. | I aˇgree.| c. | I aˌgree.|

Unit 2: Division of the speech flow into IPs (Halliday's choice of *tonality*):
Read: Tench 1996. Ch.2.

Neutral tonality
A clause that consists of 1 and only 1 IP is regarded as neutral in tonality.
(1) | A ˈdog is a ˈman's best ˋfriend.|
Basis: functional equivalence of IP (phonological unit), clause (syntactic unit), and information unit (semantic unit).

Marked tonality
When IPs do not coincide with whole clauses.
(2) | I'm going into ˋtown | this ˌmorning.|
(3)a.| He ˈdid. I ˋsaw it.| b. | ˈDaisy! Good ˋmorning dear.|
The usual maximum number of stresses in an IP is 5.
(6)a. | The ˈchildren wrote ˈpostcards to their ˈparents from ˋcamp.|
    b. | The ˈoffice ˈsends the ˈstudents their ˈgrants in Ocˋtober.|
    c. | The ˈoffice ˈsends the ˈforeign ˈstudents their ´grants | in Ocˋtober.|
(7) |The ˈtrain arˈriving at ˈplatform ´two | is the ˈten ˈtwenty from ˈSwansea to ˈLondon ˋPaddington.|

Further cases of marked tonality
        LISTS
(8) | He could speak ´English, | ´French | and ˋGerman.|
(10)a. | We want ´red, | ´white | and ˋblue flags, please. | segregatory coordination
    b. |We want ˈred, ˈwhite and ˋblue flags please.| integratory coordination
        OR-CONSTRUCTIONS
        (YN-Questions vs. Alternative Questions)
(61)a. | Will it be ˈmore or less on ´time?| b. | Will it be ´more | or ˋless on time?|
(62)a. | Do you ˈwant one or two ´books?| b. | Do you want ´one | or ˋtwo books?|
        MARKED THEMES
(11) | This ´morning | I'm ˈgoing into ˋtown.|
(12)a. | Last ˇnight | you ˈcame in too ˋlate.|
    b. | Whatˈever your exˇcuse, | you should be ˈin by eˋleven.|
    c. | These i´deas | you must reˋject.|
    d. | If you go ˈout in the ´evening, | I want you ˈin by eˋleven.|

<u>INORGANIC (EXTRA-SENTENTIAL (i.e. E.S.) PARTS</u>
Disjuncts (e.g. *unfortunately, briefly, frankly*), conjuncts (e.g. *nevertheless, however*), viewpoint adjuncts (e.g. *technically, from a personal point of view*), vocatives (e.g. *darling*), quoting clauses (e.g. *he said*), final epithets (e.g. *the bastard*). Inorganic parts are normally in separate IP when in utterance-initial and medial position. When in final position, they either have an IP of their own or are incorporated into the preceding IP.

(13)a. |Ho^Vwever, | he ˈran the ˈmile in ˈfour ˋminutes.| <CONJUNCTS>

   b. | He ˈran the ˋmile, | hoˌwever, | in ˈfour ˋminutes.|

(15)a. | Po^Vlitically, | the deˈcision was a ˋclever one.| <VIEWPOINT ADJUNCTS>

   b. | The deˈcision, | from a po^Vlitical point of view, | was a ˋclever one.|

(16)a. | Miss ^VSmith, | can you ˋhelp me?| b. | Can ˋyou, | Miss ˌSmith, | ˋhelp me?|

                                                      <VOCATIVES>

(161)a. | I've ˈnever ˋread it, though.| ≈ | I've ˈnever ˋread it, | ˌthough.| <CONJUNCTS>

   b. | You must ˋread it, of course.| ≈ | You must ˋread it, | of ˌcourse.| <DISJUNCTS>

   c. | He's ˈnot going to ˋread it, you know.| ≈ | He's ˈnot going to ˋread it, | you ˌknow.|

                                                      <STYLE INDICATORS>

   d. | They've alˈready ˋread it, however.| ≈ | They've alˈready ˋread it, | hoˌwever.|

                                                      <CONJUNCTS>

   e. | I've beˈgun to ˋread it, at least.| ≈ | I've beˈgun to ˋread it, | at ˌleast.|

                                                      <DISJUNCTS>

   f. | We're in a ˈpoor ˋshape, economically.| ≈ | We're in a ˈpoor ˋshape, | ecoˌnomically.|

                                                      <VIEWPOINT ADJUNCTS>

   g. | He ˋdrives, normally.| ≈ | He ˋdrives, | ˌnormally.| ≠ | He ˈdrives ˋnormally.|

                                                      <DISJUNCTS>

   h. | I ˈcouldn't ˋspeak to him, frankly.| ≈ | I ˈcouldn't ˋspeak to him, | ˌfrankly.|

    ≠ | I ˈcouldn't ˈspeak to him ˋfrankly.| <DISJUNCTS>

   i. | They're ˋhere, John.| ≈ | They're ˋhere, | ˌJohn.| <VOCATIVES>

   j. | ˈDon't ˋrun, he said.| ≈ | ˈDon't ˋrun, | he ˌsaid.| <QUOTING CLAUSES>

    k. | He ˈshouldn't have ˋdone it, the fool.| ≈ | He ˈshouldn't have ˋdone it, | the ˌfool.

                                                      <EPITHETS>

    <u>TAGS</u>
    Checking vs. copy tags

(17)a. | ˈJohn's going ˋout, | ˋisn't he?| b. |ˈJohn's going ˋout, |ʹisn't he?| Checking tags

(18) | ˈJohn's going ˋout, |ʹis he?| (19) | ˈJohn's going ˋout, is he?| Copy tags

Tonality contrasts in grammar
    <u>DEFINING AND NON-DEFINING ITEMS</u>

(21)a. | My ˈbrother who ˈlives in Naiˋrobi| b. | My ^Vbrother, | who ˈlives in Nai^Vrobi|

(22)a. | The ˈman dressed in ʹblack | stood ˋup.| b.| The ^Vman, | dressed in ^Vblack, | stood ˋup.|

(23)a. | The ˈman in ^Vblack | stood ˋup.| b. | The ^Vman, | in ^Vblack, | stood ˋup.|
    <u>APPOSITION</u>

(25)a. | ˈTom ˊJones, | the ˊsinger, | comes from South ˋWales.|

    = a' | ˈTom ᵛJones, | that is the ᵛsinger, | comes from South ˋWales.|

      b. | ˈTom Jones the ᵛsinger | comes from South ˋWales.|

(29)a. | They conˈsidered Miss ˈHartley a ˈvery good ˋteacher.|

    b.| They conˈsidered Miss ˋHartley, | a ˈvery good ˋteacher.|

(32)a. | The ˈnews that the ˈtroops would be ᵛleaving | has been anˋnounced.|

    b.| The ᵛnews, | that the ˈtroops would be ᵛleaving, | has been anˋnounced.|

        <u>NEGATIVE DOMAIN</u>

(41)a. | I ˈdidn't ˊcome | because he ˋtold me.| b. | I ˈdidn't come because he ᵛtold me.|

(42)a. | He ˈdidn't ˊgo | so that he could ˈget a proˋmotion.|

    b.| He ˈdidn't go so that he could ˈget a proᵛmotion.|

        <u>REPORT CLAUSES</u>

(43)a. | He ˈsaid he would ˋcome.| ~ | He would ˋcome, he said|

    b. | Did he ˈsay he would ˏcome?|

    c. | I reˈported that they had ˈtaken a deˋcision.| ~ | They'd ˈtaken a deˋcision, I

      reported.|

    d. | They ˈasked if he ˈknew the deˋcision.|

    e. | He ˈdidn't know whether they had alˈready deˋcided.|

    f. | We ˈvery much ˈhope they will ˋthink about it.|

(44) | He ˏsaid, | "I'll ˋcome".|

(45)a. | And then he'll ˈsay who's ˋcoming.|

    b. | And then he'll ˏsay, | "'Who's ˋcoming."|

Unit 3: Locating the nucleus within the IP (Halliday's choice of *tonicity*)

Read: Tench 1996. Ch.3.

The function of the nucleus (tonic) is to indicate the focus of information or the end of new information.

(1) Can you break an apple in two?

Neutral tonicity

(2) To have the tonic (nuclear) syllable within the last open-class item in the IP. (Open-class items are always lexical items.)

(3) Can you ˈbreak an ˈapple in ˏtwo?|

Lexical items (= content words), form open-classes mainly but some of them are closed-system items (e.g. *here – there, now – then, today – tonight*). Grammatical items (= function words) are closed-system items.

Broad focus = the whole IP is new information; usually with neutral tonicity:

(4) | I ˈthink I'll ˈgo and have a ˈcup of ˋtea.|

(5) | ˈˈWhere are you ˈgoing on your ˋholidays?|

(6) | ˈLook at that ˋman up there.| (6) | Did you ˈhave a nice ˌtime?|

(7) | This ˈchap lived in erm a ˈsemi-detached ˅house | and next ˊdoor | there was a ˊman | who'd ˈjust bought a new ˊcar | and he was ˋtelling me | that one ˋmorning | he was ˈlooking through the ˅window | …

Narrow focus = some part of the IP is new, some given; may occur with neutral tonicity, as in (9B) or (99B), but usually has marked tonicity, as in (10B), (11B), (12B).

(9) A: | I ˈthink I'll ˈgo and have a ˈcup of ˋtea.|

   B: | Well, ˈwhy don't you come and have a spot of ˋlunch?|

(10) A: | ˈWhere are you ˈgoing on your ˋholidays?|

   B: | To ˋItaly. | And where are you going on ˋyour holidays?|

(11) A: | Did you ˈhave a nice ˌtime?|

   B: | We had an ˋawful time.|

(12) A: | ˈLook at that ˋman up there.|

   B: | And look at ˋthat man.|

(99) A: | ˈLook at that ˋwoman up there.|

   B: | ˈLook at that ˋman up there.|

Given information is recoverable from the linguistic context or the situation or from general knowledge. (13) |He ˈbought a ˌcar | and he alˈlowed his ˋwife to drive. |

Marked tonicity
cf. (10B), (11B), 12B), (13) above.

CONTRAST
(14)a. Neutral: | I've been asking for ˋages.|

   b. Marked (i): | I ˋhave been asking for ages.| polarity

   c. Marked (ii): | I have ˋbeen asking for ages.| aspect/tense

(15) | It's not what ˋI think | but what ˋyou think. | pronoun

(16) | Think of what you can put ˋinto it | not what you can get ˋout of it.| preposition

(17) | Reˋmember | I said ˋif.| conjunction

(18) | ˈThat's what you're ˊexporting | and we're ˋimporting.| morpheme

(19) | He ˈgot a new ˊbookshelf | but what we ˈneed is a new bookˋcase.|

                          2nd element of compound

AVOIDING TONIC ON REPEATED ITEM
(21)a. Neutral: | ˈWales ˊthree, | ˈBelgium ˋone. |

   b. Marked: | ˈBelgium ˊone, | ˋWales one. |

(22) "751-281" = | ˈˈseven five ˊone | ˈtwo ˋeight one |

PRESENTATION SENTENCES = EVENT SENTENCES
(23)a. | The ˋdoctor's coming.| ~ | The ˈdoctor's ˋrunning.|

   b. | An ˋaccident has happened.| ~ | An ˈaccident is being inˋvestigated.|

   c. | Don't ˋworry. | ˋJohn's going.| ~ | ˈJohn's ˋeating.|

d. | A ˋquestion was raised.| ~ | A ˈquestion was ˋanswered.|

e. | The ˋpostman called.|

f. | The ˋchimney's falling down.|

g. | Disˋcussions took place.|

FINAL ADVERBIALS AND INORGANIC ELEMENTS

(24) Essential information: a. |The ˈbooks are ˋhere.| b. |ˈPut the books ˋhere.|

　　　Circumstantial information: c. | We've ˈgot some ˋbooks here.|

　　　　　　　　　　　　　　　　= | We've ˈgot some ˋbooks |ˌhere.|

Also *there, now, today, yesterday*, etc., cf. also (161) in Unit 2.

(25)a. |Let's ˋgo now.| ≈ b. | Let's ˋgo |ˌnow.| ≠ c. | ˈLet's go ˋnow.|

(26)a. | Let's ˋgo there.| ≈ b. | Let's ˋgo |ˌthere.| ≠ c. | ˈLet's go ˋthere.|

(27)a. | That's ˋall for today.| ≈ b. | That's ˋall | for toˌday.| ≠ c. | That's ˈall for toˋday.|

(28)a. | I saw ˋJohn yesterday.| ≈ b. | I saw ˋJohn |ˌyesterday.| ≠ c. | I saw ˈJohn ˋyesterday.|

(29) = (161) in Unit 3: Final conjuncts, disjuncts, viewpoint adjuncts, style indicators, vocatives, quoting clauses, epithets.

Adjuncts of manner are organic parts of sentences, and so receive the tonic when final:

(30)a. | ˈLet's go ˋquickly.| b. | He ˈread it very ˋwell.|

　　c. | He ˈdrives ˋnormally.| d. | I ˈcouldn't ˈspeak to him ˋfrankly.|

ADJECTIVAL WH-OBJECTS (combinations of WH-determiner+N as objects)

(55)a. | What ˋseeds did you use?| b. | Which ˋcourse did you take?|

　　c. | Whose adˋvice will you accept?|

(56)a. | ˈWhat did you ˋdo?| b. | ˈWhose adˈvice did you find most ˋuseful?|

OBJECTS WITH PREDICTABLE VERBS AFTER THEM

(57)a.| ˈJohn has a ˋduty to perform.| b. | ˈJohn has a duty to perˋform.|

(58)a. | I have a ˈpoint to ˋemphasize.| b. | I have a ˋpoint to make.|

(59)a. | The end of the chapter is reserved for various ˈproblems to comˋputerize.|

　　b. | The end of the chapter is reserved for various ˋproblems to solve.|

　　see Bolinger (1972)

GIVEN AND CONTRASTED

(31) | ˈTom, Dick and Harry ˈall got ´firsts | but ᵛTom | was given the ˋprize.|

GIVEN AND DENIED (insistence clauses)

(32)A.- | How many ˋtea-bags do you use?|

　　B.- | I don't ˋuse tea-bags.|

(33)A.- | Has ˈJohn read ˈSlaughterhouse ˌFive?|

　　B.- | ´No, | John doesn't ˋread books.|

Tonicity contrasts in grammar

(35)a. | I've ˈnever ˋtaught myself.| ≠ b. | I've ˈnever taught myˋself.|

(36)a. | ˋShoot, John.| ≈ | ˋShoot, |ˌJohn.| ≠ b. | ˈShoot ˋJohn.|

(37)a. |They ˈdidn't ˈcome, happily.| ≈ | They ˈdidn't ˈcome, | ˌhappily.|

≠ b. | They ˈdidn't come ˈhappily.|

(38)a. | He ˈasked ˈJoe, stupidly.| ≈ | He ˈasked ˈJoe, | ˌstupidly.|

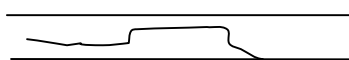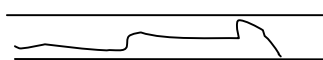≠ b. | He ˈasked Joe ˈstupidly.|

Unit 4: Nuclear tones = Nuclear contours (Halliday's choice of *tone*)

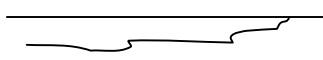Read: Tench 1996. Ch.4, sections 4.1., 4.2., 4.3., 4.4..

Nuclear contours:
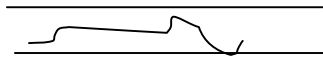
HF, LF, HR, LR, FR, RF, (M = in some analyses: H)

(1)a. |Are you ˈgoing aˈway?| b. |Are you ˈgoing aˌway?|

(2)a. | Are you ˈgoing aˊway?| b. | Are you ˈgoing aˌway?|

(3) | I ˈgo there ᵛusually.| = simple FR

(4) |But ˈI didn't fail the eˌxam.| = compound (divided) FR

(5) |He ˌgot a dis^tinction.|

(6)a.|When I ˈwent to –Africa…| b. | When I ˌwent to –Africa…|
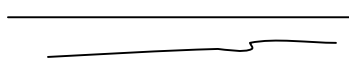
> N.B. 1. In the simple FR (3) the syllables after the fall may gradually rise one after the other, in the compound FR (4) they are at the lowest level until the final low rise. In the simple FR the rise ends at a higher pitch than in the compound FR. The difference is sometimes neutralised, as in (501): | I ˈlike ˌchocolate.| = | I ᵛlike chocolate.|
>
>   2. The Mid level (6a, b) is never sentence-final, it's an alternative to a non-sentence-final LR.

Local meanings of nuclear contours:

Falls: **HF, LF**: '*final, complete, definite, separate*'

(10)a. | He ˈstayed for three ˈhours.|

b. | He ˈstayed for three ˌhours.| 'weighty'

c. | He ˌstayed for three ˈhours.| 'protesting'

   RF: '*final, complete, definite, separate*' + '*impressed*'

(11) (He got a first!) | ^Did he?!| At ^Cambridge, | ^too!| ^Mm!| (12) | ^Clever!|

       or '*final, complete, definite, separate*' + '*challenging*' = 'negatively impressed'

(13)a. (They're emptying the dustbins.) | They ^always empty them on Fridays.|

b. (I couldn't find any adverbs.) | But there are ^lots of them in the text.|

c. (I need a nice long holiday.) | Don't we ^all!|

<u>Rises (dependent = non-sentence-final):</u> LR, HR, FR, (M)

On subjects:

    LR: *formal+non-final*, **HR**: *casual+non-final*, **M**: *non-final*, **FR**: *contrast+non-final*

(11) | Private ^Venterprise | is always ef^Vficient, | whereas public /ownership | means   \

      inefficiency.|

On adverbials:

    LR: *formal+non-final*, **HR**: *casual+non-final*, **M**: *non-final*, **FR**: *emphatic+non-final*

(15)a. | Un^Vfortunately,|⌐

    b. | Un/fortunately,| their ˈbest ˈplayer didn't turn ˋup.|

    c. | Un´fortunately,|

    d. | Un–fortunately,|⌐

(16)a. | ˋLiterally,| he banged his head against the ˋwall.| \<REINFORCING>

    b. | Of ˋcourse | if you ^Vdo it that way, | it won't ˋwork.|

    c. | Beˋsides, | he didn't get a high enough ˋmark.|

(17)a. | Pre^Vsumably | he thinks he ˋcan.| \<LIMITING>

    b. | ^VUsually | he comes on ˋSundays.|

    c. | Acci^Vdentally | he got it ˋright.|

(18)a. | ˋClearly,| he's not as good as he ˋthinks he is.|

    b. | ^VClearly,| he's not as good as he ˋthinks he is.|

(19)a. | I went to ˋLondon | on /Monday.|

    b. | He didn't get a high enough ˋmark| un/fortunately.|

(20)a. | I do it ˋthis way | ˋalways.| b. | He made a ˋmess of it | deˋliberately.|

On coordinated clauses:

(21)a. | He took the /car, | and drove to ˋLondon.|

    b. | He cleaned it –up, | and sold it for two hundred ˋpounds.|

(22)a. | She's twenty-eight years ˋold, | and lives in East ˋGrinstead.|

    b. | She's twenty-eight years /old, | and thinking of starting a ˋfamily.|

On subordinate clauses:

(23)a. | Because I hadn't had any ^Vaspirins, | I felt a bit ˋbetter.|

    b. | I feel a bit ˋbetter | when I don't take any /aspirins.|

    c. | I felt a bit ^Vbetter | because I hadn't had any ˋaspirins.|

<u>Rises (independent = sentence-final)</u>

    LR on declaratives: '*uncertainty*',

    with NO preceding high pitch accent: '*non-committal, grumbling, reserved, cautious*'

(24)a. | It's /not.| b. | He didn't help /me.|

    with a preceding high pitch accent:'*soothing, reassuring, patronizing*', except in YNQs, where this is *normal* ('*politely interested*') for BrE.

(25)a. | It ˈwon't /hurt.| b. | I'll be ˈback next /week.| c. | ˈAll you'll ˈfeel is ˈone little /prick.|

(26) | ˈCan you /help me?|

    HR: '*echo or repetition question*'

(27)a. (I'm taking up taxidermy this autumn.) | Taking up ˊwhat?|

    b. (She passed her driving test last week.) | She ˊpassed?|

    c. (When are you going to do it?) | When am I going to ˊdo it?|

    d. (Make sure you get there at ten.) | At ˊten?|

(28)a. | ˊPardon?| b. | ˊWhat?|

     But also on *non-echo, non-repetition questions*. BrE: '*casual*', AmE: '*normal*'

(29) | Are you ˊgoing?|

     N.B. There is a growing tendency to use HR for declaratives in Australian English, e.g. |This is ˊHeather|, cf. P. Warren (2016)

  FR --'*warning*' on declaratives and imperatives:

(30) a. | You won't ᵛlike it.| b. | Be ˈcareful you don't ᵛfall.|

     -- on declaratives: often '*reservations, emphatic contrast, contradiction*'

(31)a. (When will we be seeing you?) | Well, | I could come on ᵛSaturday.|

    b. | I like his ᵛwife, | although I can't stand ˋhim.|

    c. (Is that part of the coast very crowded at weekends?) | Well ᵛHastings will be.|

    d. (That was quite a good hotel really.) | It wasn't what you'd call ᵛclean.|

    e. (She's twenty-two, isn't she?) | Twenty-ᵛnine.|

     Interaction with negatives (a special case of reservations):

(32)a. | I'm not going to perform ˋanywhere.|

  ≠ b. | I'm not going to perform ᵛanywhere.|

(33)a. | Cheap tickets are not available to ˋanyone.|

   ≠ b. | Cheap tickets are not available to ᵛanyone.|

(34)a. | She didn't ˊgo | because she needed a ˋholiday.|

   ≠ b. | She didn't go because she needed a ᵛholiday.|

(35)a. | ˋAll of them didn't pass the exam.| ≠ b. | ᵛAll of them didn't pass the exam.|

(36)a. | He didn't get ˋone credit.| ≠ b. | He didn't get ᵛone credit.|

  Compound (divided) FR: 'I told you so.' = '*self-justificatory*':

(37) | I ˋthought she was ˏmarried.| (and so she was!)   (38) | I ˋknew he would ˏdo it.|

                    or '*appealing*':

(39)a | ˋPlease sit ˏdown.|

    b. | I'm ˋlonging to see your new ˏcoat.|

    c. | Do you ˋhave to be so ˏstubborn?|

    d. | ˋWhy don't you keep your ˏmouth shut?|

Unit 5: The functions of intonation
Read: Tench 1996. Ch.1, section 1.4
.

A) *The informational function: the organization of information ("What is being said?")* Division of the information into pieces, the staging (= ordering) and grading of these pieces (as major, minor, incomplete), signalling new and given information.

B) *The communicative or illocutionary function: the realization of communicative functions ("Why is it being said?")*   (1)a. | ˈIsn't it ˋhot?| b. | ˈIsn't it ˊhot?|

C) *The attitudinal function: the expression of attitude ("How is it being said?")*

In combination with paralinguistic features, kinesic features, and choice of words.

(2) |The Con'servatives won a\gain.|

a.

b.

c.

Coates (1975): Hung. yes-no questions sound authoritative to Enflish listeners.

*D) **The grammatical function:** the signalling of syntactic structure*
(3)a. | My 'brother who lives in Nai$^{\vee}$robi.| b. | My $^{\vee}$brother | who lives in Nai$^{\vee}$robi|
(4)a. | She 'washed and brushed her \hair.| b. | She /washed | and brushed her \hair.|
(5)a. | He \asked himself.| b. | He 'asked him\self.|

*E) **The textual function:** the signalling of textual structure*
   The notions of *baseline* (the line connecting the low pitches in an IP), *key* (or register
   = the general pitch level of an IP), *paratone* (the spoken equivalent of a paragraph).

Brazil, Coulthard, Johns (1980):
(6)   H | $^{\vee}$Now | be'fore I came to
      M   \school |
      L   'this /morning | I 'had my \breakfast | |

      H   I had some /cereal |
      M   I had some /toast | and I had an /egg | and I had a cup of /tea |
      L

      H
      M   and I had a /biscuit | and 'then I came to
      L   \school | |

(7) H 'Wales played   'beat them 'one \nil | |
     M   Bra\zil | and
     L

(8) H The 'Party $^{\vee}$candidate|
     M
     L   'lost his de\posit.| |

 (9) H But then the 'next /student | got it \right.| |
     M
     L   a 'really /clever bloke |

(10) H He's ＼coming |

   M   to＼night. | |

   L   he ／said |

Two further, minor, intonational functions:

F) ***Style-indicating function:*** *the identification of speech styles*

G) ***Indexical function:*** *the identification of the speaker*

PART II. THE AUTOSEGMENTAL APPROACH TO INTONATION

Unit 6: Pierrehumbert (1980)

Recommended reading: Ladd 2008. Ch. 3. Section 3.1.

While British schools of intonation tend to focus on pitch contours (see Part i), American schools tend to rely on pitch levels, from which the contours are composed. For instance Pike (1945), and American structuralists (like Trager and Smith 1951) described American English intonation by means of 4 (phonemic) pitch levels.

Current research in intonational phonology mainly uses the ***autosegmental approach***, launched by J.A. Goldsmith (1976): phonological representations have several autonomous tiers of representation, with events of different kinds taking place on each tier, partly simultaneously.

(1) tonal tier: LH L

                                \/ |

   syllabic tier (axis):   fa ri   'farm' (in Margi, a langugae spoken in Nigeria)

Phonological goal of the autosegmental approach to intonation is to characterise intonation contours in terms of a string of categorically distinct elements. Phonetic goal of this approach: to provide a mapping from phonological elements to continuous acoustic parameters.

The first great work in this approach was **Janet Pierrehumbert** (1980, publ. 1987).

(a) She continued to use a levels analysis (an inheritance of Amer. structuralism) but restricted the number of levels to two: H and L.

 (b) She did not recognize a constituent structure within the IP but regarded it as a sequence of optional left boundary tone, one or more pitch accents, one phrase accent, one right boundary tone. *Pitch accents* are intonational prominence markers added to stressed syllables. *Phrase accents* (a.k.a. phrase tones) influence the pitch contour betw. the last pitch accent and the end of the IP. Phrase accents and and boundary tones together can be called edge tones.
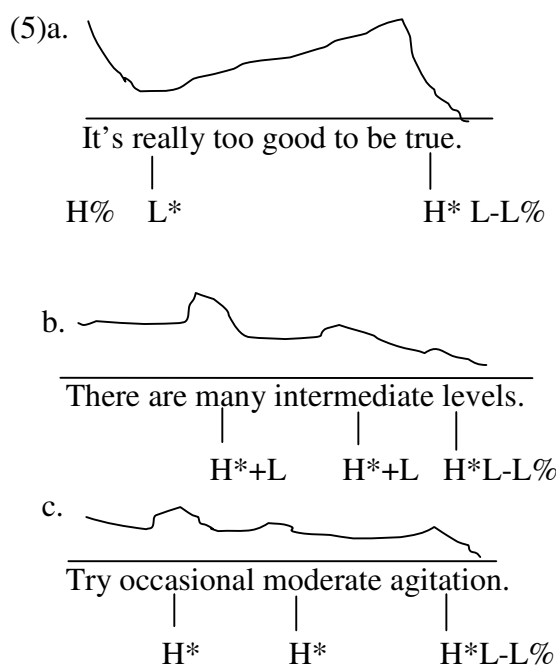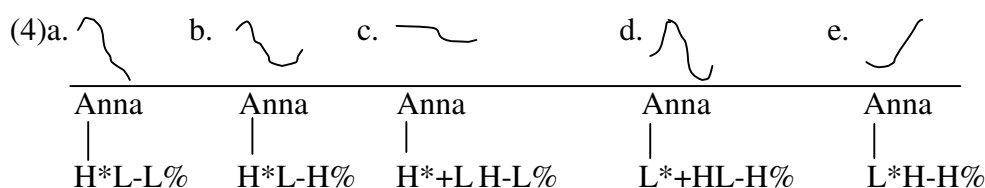

(2) Pitch accents: a. H*, b. L*, c. L*+H, d. L+H*, e. H*+L, f. H+L*,

        N. B. The bitonal pitch accents contain a *leading tone* (2d, f) or a *trailing tone* (2c, e) in addition to the starred (or central) tone.

All possible tunes of Engl. can be generated by the following tonal grammar:

(3)

Boundary tone   Pitch accents   Phrase accent   Boundary tone

H%   H*   H-   H%
L%   L*   L-   L%
            L*+H
            L+H*
            H*+L
            H+L*
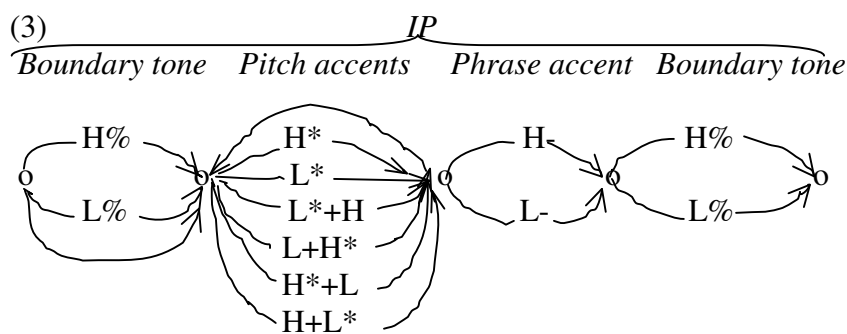
> N.B. 1. All combinations are legal.
>   2. No difference betw. "prenuclear" and "nuclear" accents.

(4) a.   b.   c.   d.   e.

Anna   Anna   Anna   Anna   Anna
│   │   │   │   │
H*L-L%   H*L-H%   H*+L H-L%   L*+HL-H%   L*H-H%

(5) a.

It's really too good to be true.
    │   │
H% L*   H* L-L%

b.

There are many intermediate levels.
        │   │   │
        H*+L   H*+L   H*L-L%

c.

Try occasional moderate agitation.
    │   │   │
    H*   H*   H*L-L%

Problems with Pierrehumbert's model:

--- It allows any random combination of prenuclear and nuclear pitch accents (because each choice of pitch accent is independent , whereas in reality prenuclear (i.e. non-last) pitch accents in an IP tend to be identical.

--- It treats downstep in an extremely abstract way, by assuming that the bitonal pitch accent H*+L triggers downstep in the following starred H* tone and then its L part is deleted, see (5b). Ladd (2008: 97-98) suggests a better solution for downstep, the downstep symbol /!/:

(6)a. Pierrehumbert: b. Ladd:
    There are many intermediate levels.   There are many intermediate levels.
          | | | | | |
      H*+L   H*+L H*L-L%   H*   !H* !H*L-L%

(7)a. Pierrehumbert: b. Ladd:
     Anna   Anna
      | |
    H*+L H-L%   H* !H-L%

Further developments concerning the Phrase accent

In Pierrehumbert's system there is one phrase accent in an IP, between the nuclear pitch accent and the final boundary tone. Thus the phrase accent always appears together with a final boundary tone:

(8) L-L%, H-H%, L-H%, H-L%

M. E. Beckman & J. B. Pierrehumbert (1986) recognized the possibilty of there being a phrase accent between pitch accents and introduced a second kind of intonational unit: the *Intermediate Phrase* (IntermP = a sequence of pitch accents followed by a phrase accent), in addition to the generally recognized *Intonational Phrase* (IP = a sequence of pitch accents followed not only by a phrase accent but also by a boundary tone).

 (9)   [IP [IntermP Edinburgh's][IntermP the capital of Scotland]]
                 | |
           H*   L-   L+H* L- L%

That is to say: there can be several phrase accents in an IP, each at the end of an IntermP.

Unit 7: ToBI
Recommended readings and videos:
Harrington, J. 2006a.
Harrington, J. 2006b.
Veilleux, N., S.Shattuck-Hufnagel & A. Brugos 2006.
Cowart, R. Constructing pitch tracks in Praat.
https://www.youtube.com/watch?v=DSWra0x8YTE

Pierrehumbert's theory gave rise to a new kind of intonational notation (transcription), *the ToBI system* ("**To**nes and **B**reak **I**ndices"), indicating (i) the *tones,* i.e. pitch accents, phrase accents, boundary tones, and (ii) the strength of the *breaks* between the neighbouring words. The 1997 version is available at: http://www.ling.ohio-state.edu/~tobi/ame_tobi/labelling_guide_v3.pdf

(1) instrumental displays: window 1: waveform
                              window 2: spectrogram with F0 curve
        transcription proper: panel 1: tone tier (= tonal tier)
                              panel 2: orthographic tier
                              panel 3: break index tier
                              panel 4: miscellaneous tier

(2) Edinburgh's   the capital of Scotland.   *orthographic tier*
          │   0   2   1   1   1 │   4   *break index tier*

     H*   L-   L+H*   L-L%   *tonal tier*
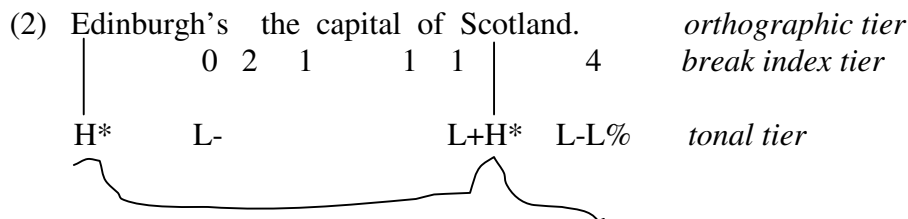
Notes on the Break index tier:
4 is the break index between IPs, 3 between IntermPs, 1 between words that have not grown
together within IntermPs, and 0 (= no break) between words that have grown together. The
break index 2 is exceptional because it is bifunctional: it is reserved for breaks between
IntermPs which are less strong than the expected 3, and for breaks that are stronger than the
expected 1 between words within an IntermP.

ToBI as intonational tanscription
ToBI is not a universal transcription device for the intonation of languages (like IPA is for the
sounds of languages). It was originally invented for English, and has to be developed separately
for each language.

There are very useful and easy-to-understand tutorials on ToBI transription by Jonathan
Harrington (2006a, 2006b). These materials present a simplified ToBI model, recognising
     only 3 pitch accents: H*, L*, L+H*
     no initial (left) boundary tone
     4 edge tone (= phase accent and right boundary tone) combinations: H-L%, H-H%, L-H%,
          L-L%
But be careful, a) they use the term "prosodic phrase" for IP,
               b) they use the term "boundary tone" for each edge tone combination. Thus, the
combinations H-L%, H-H%, L-H%, L-L% are called "boundary tones".

PART III. PRACTICE AND EXERCISES

How to construct intensity- and pitch curves with Praat

1) If you have Praat on your computer, click on its icon, and two windows will appear: "Praat objects" on the left, and "Prat picture" on the right.
2) In the Picture window you produce a box (= picture frame) with the mouse (e.g. horizontal 0.5-6, vertical 0.5-1.5), for the sound picture.
3) In the Objects window click - *Open*, - *Read from file* (write in the name of the sound file you want to analyse), - *Open*. Now the word *Sound* and the name of the file appears in the first line of the Objects window. Click *View and edit*.
4) Now a third window (the sound window) appears called "Sound + the name of the file." This shows the spectrogram, the F_0 curve and the intensity curve of the sound file, which you can hear whenever you click the tab button. And you can select various parts of it to hear and see (and measure) separately. You select the part you want to analyse. Then click - *File*, then *Extract sound selection (time from 0)*.
5) Now in the 2nd line of the Objects window appears: *Sound untitled*. Click - *Draw*, - *Draw, - Garnish* (with a tick), and - *OK* .
6) Now in the Picture window the picture of the sound wave appears in the box prepared for it.
7) In the Picture window, below the sound wave box, produce a second box (e.g. horizontal 0.5 –6, vertical 2.5-4) with the mouse, for the intensity curve.
8) Go back to the 3rd window (the sound window), and click - *Intensity, - Extract intensity contour*.
9) Now in the 3rd line of the Objects window appears: *Intensity untitled*. Click - *Draw*, adjust *Intensity range* to 20dB-100dB, - *Garnish* (with a tick), and *OK*.
10) Now in the Picture window the picture of the intensity curve appears in the box prepared for it.
11) Now in the picture window, below the intensity box, produce a third box (e.g. horizontal 0.5-6, vertical 5-6.5) with the mouse, this time for the pitch (=F_0) curve.
12) Go back to the 3rd window, and click - *Pitch*, - *Extract visible pitch contour*.
13) Now in the 4th line of the Objects window appears: *Pitch untitled*. Click - *Draw*, - *Draw* , and adjust *Frequency range* to 50-250 Hz, - *Garnish* (with a tick), and - *OK*.
14) Now in the Picture window the pitch curve appears in the box prepared for it.
15) You can save the three boxes in the Picture window by selecting with the mouse the outer viewpoints of the pictures you want to save, and clicking - *File*, - *Save as Windows metafile*, and in the Objects window you write the name of the file with an extension **.emf** in *Insert*, and click – *Save*.

Exercises

(Exercises marked PR are from Peter Roach 1991. English Phonetics and Phonology. 2nd ed. Cambridge: CUP <K880>)

Tones

Ex. 2. (PR Unit 15) Production of tones (High and low varieties are not distingusihed.)
When you hear the number, say the syllable with the tone indicated:
1. ′them   2. ˎwhy   3. ˅well   4. ˎJohn
5. ′what   6. ˄no   7. ˎhere   8. ˅you
9. ′now   10. ˎend

Ex. 3. (PR Unit 15) Identification
You will hear each syllable twice. Write an appropriate tone symbol.

one	two	three	four	five
six	now	you	more	us

Ex. 4. (PR Unit 15) Production in context
When you hear the sentence, say the response with the tone indicated:

Hello, is that 661071?	′Yes
Do you know any scientists?	˅Some
Keep away from that road!	ˎWhy
How may dogs have you got?	ˎTwo
Have you ever heard such a terrible thing?	˄No
What colour is your car?	ˎRed
Do you want my plate?	′Please
Don't you like it?	˅Yes
You haven't seen my watch, have you?	′No
What was the weather like?	ˎWet

Ex. 5. (PR Unit 15)
In the following sentences and bits of dialogue, each underlined syllable must be given an appropriate tone mark. Write a tone mark just in front of each of the syllables.
a. This train is for Leeds York Darlington and   Durham
b. Can you give me a lift
    Possibly Where to
c. No Certainly not Go a way
d. Did you know he'd been convicted of drunken driving
    No
e. If I give him money he goes and spends it
    If I lend him the bike he loses it
    He's completely unre liable

Ex. 6. (PR Unit 16) Identifying the tonic syllable.
1. We could go by bus   2. Of course it's broken
3. The car was where I'd left it   4. How much is the biggest one

5. I knew it would go wrong   6. It was too cold
7. Here it is   8. That was a loud noise
 9. We could go from Manchester   10. Have you finished

Ex. 8. (PR Unit 16) Transcribe the intonation of these IPs by using tonetic stress marks.
Listen and repeat, trying to copy the intonation exactly; no transcription is given.
What time will they come
A day re turn to London
The North Pole would be warmer
Have you de cided to buy it
I re corded them on cas sette

Ex. 13. (LV)
Identify the internal structure of the following IPs in terms of PH, H, N, and T. Utterance (j) consists of several IPs, so the IP boundaries are essential and cannot be left out. The symbol □ stands for pause.
a) ˋYes   b) ˋAren't they?
c) ˈDogs are ˈmen's best ˋfriends   d) A ˈdog is a ˈman's ˈbest ˋfriend
e) And then they ˈleft for the ˋlibrary   f) But ˈthat's ˈquite riˋdiculous
g) They ˋare a few   h) In a ˈlittle ˈless than an ˋhour
 i) In about an ˋhour
j) |and then ˈnearer to the ˅front |□ on the ˌleft| there's a ˈbit of ˋforest| ˈcoming ˈdown
    to the ˋwaterside|□ and then a ˈbit of a ˌbay|□

Ex. 14. (PR Unit 17) When you hear the number, say the item with the tone that is marked.
1.| ˋBill bought it | 5.|ˋFour of them came| 9.|ˋWhy do you do it|
2.| ˊBill bought it | 6.|ˊFour of them came| 10.|ˊWhy do you do it|
3.| ˅Bill bought it | 7.|˅Four of them came| 11.|˅Why do you do it|
4.| ˄Bill bought it | 8.|˄Four of them came| 12.|˄Why do you do it|

Ex. 17. (PR Unit 17) Transcription of IPs.
Each item will be pronounced as one IP, and will be heard three times. You must do the following things:
a) Identify the tonic syllable, deide which tone it carries and place the appropriate tone mark before it.
b) Identify the stressed syllables preceding the tonic syllable and mark them
    high (ˈ) or low (ˌ).
1. | Now here's the weather forecast | 2. | You didn't say anything about rates |
3. | A few years ago they were top | 4. | No one could say the cinema was dead |
5. | Is there anything you wouldn't eat | 6. | Have you ever con sidered writing |
7. | That was what he claimed to be | 8. | We try to do our shopping in the market |
9. | But I never go there now | 10. | It wouldn't be difficult to find out |

Tonality
Ex. 21. (PR, Unit 19)
The following sentences are given without punctuation. Underline the appropriate tonic syllable places and mark IP boundaries where you think they are appropriate.
a. he wrote the letter sadly (*he wrote the letter in a sad way*)
b. he wrote the letter sadly (*it's regrettable that he wrote the letter*)
c. four plus six divided by two equals five
d. four plus six divided by two equals seven
e. we broke one thing after another fell down
f. we broke one thing after another that night

Ex. 22. (LV) Work out the meanings (and grammatical differences) of the following:
1.a. │ He ate some ′soup │ some bread and ′butter │ and a piece of ＼cake │
   b. │ We need ′milk │ some ′bread │ and ＼butter │

2.a. │ They lost against ＼Newport of all teams │ ′didn't they? │
   b. │ They lost against ＼Newport of all teams │ ＼didn't they? │
   c. │ They lost against ＼Newport of all teams │ ′did they? │
   d. │ They lost against ＼Newport of all teams ˙did they? │

3.a. │ The man and the woman dressed in ′black │ stood ＼up │
   b. │ The ′man │ and the woman dressed in ′black │ stood ＼up │
   c. │ The man and the ′woman │ dressed in ′black │ stood ＼up │

4.a. │ They sent Joan a waitress from the ho＼tel │
   b. │ They sent ˅Joan │ a waitress from the ho＼tel │
   c. │ They sent ˅Joan │ a ˅waitress │ from the ho＼tel │

5.a. │ They called Susan a ＼waitress │   b. │ They called ˅Susan │ a ＼waitress │

6.a. │ He didn't go because he was ˅tired │   b. │ He didn't ′go │ because he was ＼tired │

7.a. │ And then he'll say who's ＼coming │   b. │ And then he'll ′say │ who's ＼coming │

8.a. │ They've left the ＼others │   b. │ They've ＼left │ the ˌothers │

9.a. │ John says Amanda is a ＼fool │   b. │ ˅John │ says Aˌmanda │ is a ＼fool │

10.a. │ The boy who couldn't cycle felt ＼miserable │
    b. │ The ˅boy │ who couldn't ˅cycle │ felt ＼miserable │

11.a. │ She's my friend ＼Carol │   b. │ She's my ＼friend │ ＼Carol │
    c. │ She's my ＼friend Carol │   d. │ She's my ＼friend │ ˌCarol │

Tonicity

Ex. 23. (LV) Work out the meanings (and grammatical differences) of the following:

1.a. |I've never ˎtaught myself| b. |I've never taught myˎself|
2.a. |ˎShoot John| b. |Shoot ˎJohn|
3.a. |They didn't come ˎhappily| b. |They didn't ˎcome happily|
4.a. |This is the girls' ˎschool| b. |This is the ˎgirls' school|
5.a. |I thought it would ˎrain| b. |I ˎthought it would rain|
6.a. |I fed her dog ˎbiscuits| b. |I fed her ˎdog biscuits|
7.a. |This is what I ˎmeant| b. |ˎThis is what I meant|
8.a. |I have instructions to ˎleave| b. |I have inˎstructions to leave|
9.a. |We only met Liz toˎday| b. |We only met ˎLiz today|

Ex. 24. (LV) Comment on the following:

1.a. |The ˈQueen said she was ˈhappy to be in ˊManchester| and then the ˈDuke made a ˎjoke|

   b. |The ˈQueen said she was ˈhappy to be in ˊManchester| and then the ˎDuke made a joke|

2.a. |Like most ˅bachelors |my ˈhusband likes ˈchatty ˎgirls|

   b. ?* |Like ˅most bachelors |my ˈhusband likes ˈchatty ˎgirls|

Ex. 25. (LV) Underline the contrastive tonic in the following:

a. (I want you to finish your lessons.) But I have finished.
b. (Why didn't you go to the party?) Well, I did go.
c. (Please hurry.) I am hurrying.
d. (Will you open the window?) It is open.
e. (When are they going to India?) But they are in India.
f. (She hates journalists.) Bad luck. I am a journalist.
g. (You can only get milk here.) OK, I want milk.
h. (Chester is a nice town.) My brother lives in Chester.
i. (This is not silver.) It is silver, sir.
j. (Thank you, Mr. Black.) Thank you, Mr. White.
k. (Bath is a marvellous place.) I know. I studied in Bath.
l. (That's a restaurant for lawyers only.) That's all right. We are lawyers.

Ex. 33. (LV) Provide a traditional transcription of the intonation of the following conversation, by using tonetic stress marks. Do it in steps: first identify the pauses in the entire recording, then listen to the individual chunks that are recorded separately. Use a pencil and a rubber.

Tapescript 1: A journalist is interviewing Mr Williams about his job (A)

(From Soars: Headway – Intermediate, Cassette 1)

A: What's your job, Mr Williams?

B: I'm a writer.

A: That's interesting. What sort of thing do you write?

B: Well, uhm articles for newspapers and maga zines eh film re views, you

21

know, uhm and oc casionally some fiction, poems and short stories.

A: Do you find it a very de manding job?

B: Well. Yes and no. It's very nice to work at home, of course, and have
the choice of when to work, but I work long hours at home, usually ten hours
or more a day. And it's very lonely some times sitting in front of a
typewriter.

A: What're you working on at the moment?

B: Well, actually I'm doing something very different from my usual work, eh,
I'm writing a bi ography of Leonard Benson, the jazz musician.

A: So I sup pose you're spending a lot of time to gether.

B: Well, no, in fact he lives in the States. I'm doing a lot of re search,
naturally. He's visiting this country at the moment and I have an
ap pointment with him, but we haven't met very often.

A: Well, thank you, Mr Williams. That was very interesting. And good luck
with the book.

B: Not at all.

Ex. 34. (LV) Analyse the pitch and intensity curves of the separately recorded chunks of Ex. 33 by using Praat.

Ex. 35. (LV) Provide a ToBI-style transcription for the intonation in Ex. 33, below each line of the conversation repeated below.

Tapescript 1: A journalist is interviewing Mr Williams about his job (B)

A: What's your job, Mr Williams?

B: I'm a writer.

A: That's interesting. What sort of thing do you write?

B: Well, uhm articles for newspapers and magazines eh film reviews, you

know, uhm and occasionally some fiction, poems and short stories.

A: Do you find it a very demanding job?

B: Well. Yes and no. It's very nice to work at home, of course, and have

the choice of to work, but I work long hours at home, usually ten hours

or more a day. And it's very lonely sometimes sitting in front of a

typewriter.

A: What're you working on at the moment?

B: Well, actually I'm doing something very different from my usual work, eh,

I'm writing a biography of Leonard Benson, the jazz musician.

A: So I suppose you're spending a lot of time together.

B: Well, no, in fact he lives in the States. I'm doing a lot of research,

naturally. He's visiting this country at the moment and I have an

appointment with him, but we haven't met very often.

A: Well, thank you, Mr Williams. That was very interesting. And good luck

with the book.

B: Not at all.

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