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Creaky voice and turn-taking in Finnish.

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1. Introduction

Non-modal phonation is sometimes invoked as part of the turn-taking system of English, (eg. Laver 1994), often in conjunction with falling pitch (cf. Iivonen 1998). This paper shows creak in Finnish talk-in-interaction to be an important linguistic-phonetic component of the turn-taking system which is closely related to, but independent from (i) syntactic and lexical resources, and (ii) intonational resources.

2. Data

- radio phone-in programmes recorded in Finland, May 2000
- ten calls transcribed
- about 23 minutes in total of recorded material
- 75 adjacency pairs (eg. question + answer; greeting + greeting) extracted and analysed
- all other turns analysed separately

2.1 *The turn-final system*

Turn-final creak forms a system: {creak, breathiness, whisper, voicelessness, exhalation} can all be used to mark turn-finality. Creak is the commonest. If there is more than one modality at the end of a turn, the order is that listed, e.g. creak < whisper < exhalation.

A turn is hearable as complete when completion on several levels has been achieved (Ford & Thompson 1996):

- pragmatic
- syntactic
- prosodic

Transition relevance is thus produced and oriented to holistically (Selting 2000).

2.2 *Placement of creak*

86% of creaky stretches start outside a stressed syllable (= first syllable of a word in Finnish), and/or after a voiceless obstruent.

3. Data Fragments

Data organised according to: ±creak turn-finally and ±change of speaker.

3.1. *Turn-final creak + change of speaker.*

This is the commonest pattern. It constitutes a norm for turn-taking in Finnish:

1. Speakers orient to it by stopping talk soon after creak is initiated, or having to engage in practices which mark out continued own talk after creak (see section 3.3), eg. increase in speed or loudness.
2. Other participants orient to creak as marking turn transition relevance by coming in, either just after it or in overlap with it.
3. It is very common.

(1) **Pelimanni/Fiddler**

80 {f,all-----}{C----}
 --> {olitteko koskaan mukana keik{oilla}h
 be-PST-2PL-QCLI ever along gig-PL-ALL
did you ever go along to the gigs

81 C --> no kyl:lä tiätys[ti] oon ollu jonkun verran
 PRT certainly of course be-1SG be-PPC to some extent
oh yes of course I did sometimes

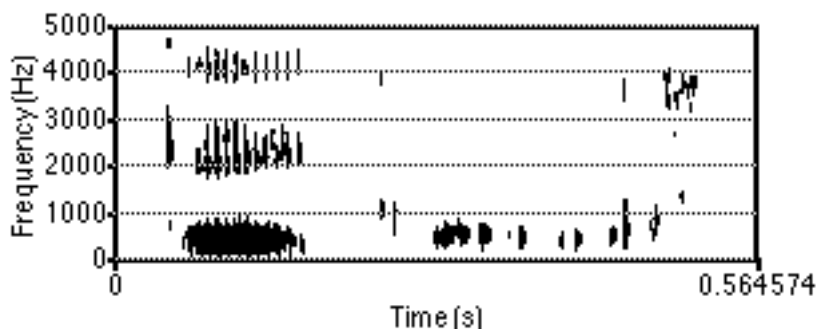


Fig. 1. *Keikoilla* (Fragment 1, line 80).

(2) **Maajussin tytär/Peasant's daughter**

119 P {C--} {H--- }
 pannaanko koneet jy_l{lää}[{mään}]
 put-4-QCLI machine-PL grind-INF3-ILL
shall we get the machines grinding

120 C {C----}
 [pan]naan vaan kiert{ämään}
 put-4 PAR turn-INF3-ILL
let's get them turning!

3.2. No turn-final creak + change of speaker.

One task for an incoming speaker who does not want incoming talk to be heard as competitive or interruptive is to design their next turn so that it is fitted with the other speaker's prior turn.

Fragment (3): P closes down the extended multi-unit turn by C, which is projected as incomplete on the fourth Turn Constructional Unit in line 9. She does this with a collaborative completion. She uses the same strategy in line 13, using a word from C's dialect (*kyntelöitti*), 'putting words in his mouth' by using a word from his dialect and not from her own.

(3) Catalonia

- 5 P {C----}
mitäs Joensuuhun k{uuluu}
how are things in Joensuu
- 6 C {C-} {C-----} {C-}
{no} kiitos /ihanhan tässä on rauhallinen {h'}
well thanks, it's quite a peaceful
- 7 {C-----}
{ilta ja vä}hän (.) oli viime /yö kylmä
evening here and last night was a bit cold
- 8 {C-----}
--> t{äällä Itä-Suomessa ja} .HH
here Eastern Finland-INE and
here in Eastern Finland and
- 9 {f-----}
{mutta päivä oli kuitenkin /aikap| /aurin^koinen}
but day be-PST-3SG however quite sunny
but the day was quite sunny
- 10 P --> {H-}
jav3|- kerrankin vappuna paist{oi}
and time-GEN-CLI May Day-ESS shine-PST-3SG
and once again the sun shone on May Day
- 11 C {C-----}
ja kerrankin vappuna paist{oi niin}
and once again the sun shone on May Day, yes
- 12 {C----} {C-----}
teki _vaik^{ka vä}hän -viil{eetä o[*]}
make-PST-3SG although a little chilly-PAR
it was a bit chilly though
- 13 P --> {H--}
[vähän kyntelöi{tti}]
a little tingle-PST-3SG
it made your hands tingle a bit
- 14 C {C--}
{niV} _vä^hän -fkynt[te][löi]tt[i]f [niin]
right, it made your hands tingle a bit, yes
- 15 P [he][he] [he] [.hh]
- 16 P {all-----}
{no mutta} kerrotteko Teuvo Tikka että mihi s(i)t(t)e:
well then Teuvo Tikka tell us where your
- 17 {C-}{p,B--} {C----}
teidän:: toivee{nn}{e n}yt heittää {meidä}t
request takes us
- 18 {W--}{H-----}
s{eur}{aava[ks]}

3.3. Turn-final creak + no change of speaker.

At least the following possibilities occur in this circumstance:

- the turn ends with a grammatical word which may project more talk to come from the same speaker (*mutta*, ‘but’, *ja*, ‘and’, *että*, ‘so, that, I mean’). The transition space is open to either the current speaker or another speaker; both formats occur.
- the turn continues with another TCU which is a reformulation of the first. The reformulation comes in quickly eg. before the next beat (Fragment 4).
- there is a long pause which indicates some kind of trouble.

Fragment 3 line 8 contains a place which is a possible TRP. The speaker holds the turn with a loud in-breath, his next talk is loud, and starts with *mutta*, ‘but’, which marks it out as not a direct continuation of his prior TCU, which ended with *ja*, ‘and’. These practices demonstrate his own orientation to transition relevance just prior to that point.

(4) Pelimanni/Fiddler

- 14 P {C-}
 --> mikäs siihen liitt{yy}
 what-CLI it-ILL is connected-3SG
 what is connected to that (choice)
- 15 {C-----}
 --> mitä:p| (.) mitä t{u[lee mieleen]}
 what what come-3SG mind-ILL
 what comes to mind
- 16 C [no sii]hen-
 well it's connected to
- 17 siihen liittyy sellaaasta ettäp|mh
 it's connected to the fact that
- 18 mun /edesmennyt ^mieheni on sen sovittanu
 my deceased husband adapted it

3.4. No turn-final creak + no change of speaker.

These cases are commonest in multi-unit turns, where the design of the turn is such that more talk by the same speaker is projected by the activity, e.g. storytelling, where other devices are used to mark completion, or, as here, by projecting more to come through the use of lexical resources.

(5) Maajussin tytär/Peasant's daughter

- 9 P [.hhh] (..) tuotap| m- ! mennäänpäs suoraan /asiaan
 PRT go-4-CLI-CLI straight-ILL matter-ILL
 erm let's get straight to the point
- 10 {all-----}
 n[iin että {on}ko teillä kotona sielläp|}(..)
 so COMP is-QCLI 2PL-ALL at+home there
 so I mean have you got there at home
- 11 C [niin]

right

- 12 P {C---}{H-----}
maat{alou}{skon[eita]}
farm machine-PL-PAR
any farm machines
- 13 C [hh] he n:o .he f_/ei: ^varsinaisesti
well actually
- 14 ftällä hetkellä olef
we haven't at the moment

3.5 Creak independent of intonation.

All examples so far have creak in conjunction with falling phrase-final intonation (L%). Rising intonation (marked here by <?>) projects more to come by same speaker:

(6) Pelimanni/Fiddler

- 1 P muttapa| sitten meille on tulossa|
but then 1PL-ADE is coming-INE
but then now we've got some more
- 2 --> {C-----}
perinteisemp{ää (0.4) kansanmusii}kia?
traditional-COM-PAR folk music-PAR
traditional folk music on the way
- 3 (0.8, .h)
4 Laura Soini (0.3) on esittänyt toivom:uksen (0.5)
Laura Soini has presented her request
- 5 {H----}
hyvää iltaa ja tervetuloa mukaan lähe[ty{kseen]}
good evening and welcome along to the broadcast

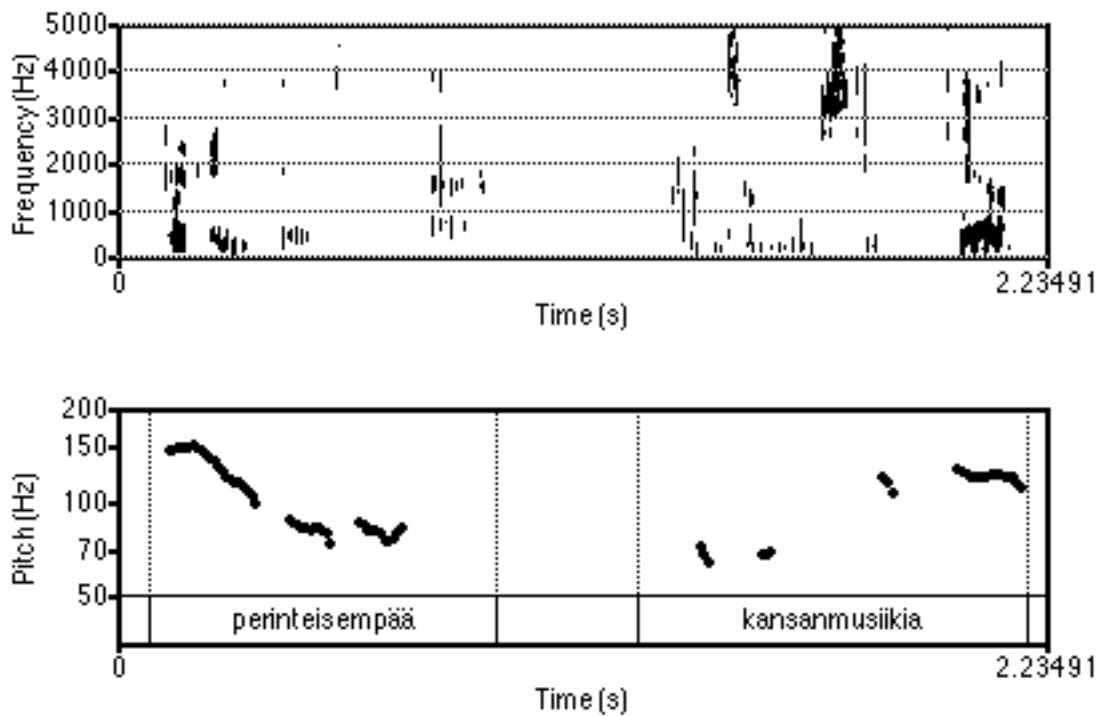


Fig. 2 *Perinteisempää kansanmusiikkia*, Fragment 6, line 2.

In (7), rising intonation projects another list item, but the end of the first list item is also marked as a relevant TRP with creak. In this way the list is treated by P as a collaborative project.

(7) **Leikkarit**

- 16 P {all-----} 165Hz 184Hz
 --> /ootteko to /itse {mahdollisesti} soittaneet
 be-2PL-QCLI 2PL self possible-ADV play-PPC-PL
have you yourself perhaps played
- 17 {C-}
 leikkar{ei}s?
 Name-pl-INE
in Leikkarit
- 18 155Hz 175Hz {B--}
 tai tunnetteko henkilökohtaisest[i(k{aan})]?
 or know-2PL-QCLI personal-ADV-CLI
or do you know (them) personally at all
- 19 C [no t]unnen
yes I do
- 20 tunnen kylläh näitäh soittajiah
yes I do know these musicians
- 21 .hh

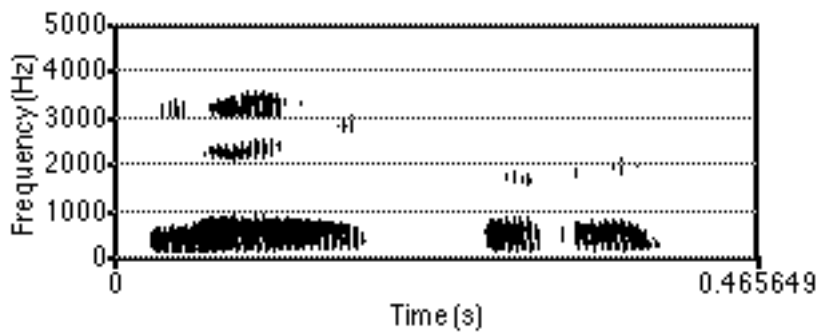


Fig. 3. *Leikkareis* (Fragment 7, line 17)

3.6 Creak independent of syntax.

Examples above contain complete syntactic structures. Fragment (8) contains neither Finnish syntax nor lexis, since the only content in the arrowed turn is a Bulgarian-language title track. The only cues to transition relevance are phonetic ones.

(8) Voix bulgares

133 C {B-} {H-----}
 [ja minkä niminen] kappale nyt tul{ee} {sitten}hh
and what's the name of the piece that's coming now then

134 (1.4)

135 P hh pitääkö mun todellakin yr[ittää [(* *) [tämä]
do I really have to try ((and say)) this

136 P2 [he [he he [he] hehe]

137 C [no j- [j-] .hh]

138 *go ahead*

139 P {C}
 --> staro bulgarski hronik{i}
 Name Name Name
((Bulgarian name of the track))

140 C {H-----}
 kiito{ks[ia]}
thank you

141 P {C---}
 [ora]t{orio}
 Name
((name continued))

142 (0.3)

143 C .hjoo
 CLI
.yeah

Conclusions

- Creak (and other non-modal voice qualities) is used in Finnish to mark out Transition Relevance Places.
- Creak is regularly placed after a stressed syllable and/or a voiceless obstruent.
- Participants in talk can be shown to orient to the use of creak as a marker of transition relevance by their own practices when talking. Creak to mark turn transition relevance

and creak oriented to as marking turn transition relevance is a normative practice.

- Creak is closely related to syntax and pragmatics: it generally occurs at places where the syntactic structure of a turn is projectably complete, and where the action that turn performs is obvious. But creak can be shown to be independent of syntactic and lexical resources available to participants in talk.
- Creak is closely related to intonation, but is probably independent of it. It generally co-occurs with falling intonation. But it can also be superimposed on rising intonation (cf. also data of Sara Routarinne, on high rising terminals in Finnish teenagers' talk).

Transcription conventions.

Transcriptions are given on several lines. The basic transcription is a modified orthography, with occasional phonetic details included. More detailed phonetic information is provided above the line. A gloss is provided below the line in *courier italics* (derivational morphemes not included), and a free translation in Times font below that. Underlining is used on the orthographic line to mark accented syllables.

^	unexpectedly high pitch	[start of talk in overlap
`	stressed syllable]	end of talk in overlap
.	low final pitch	=	immediate start/end of turn
?	high final pitch	□	relevant line in the extract
;	non-low final pitch	{	start of extent
-	word cut off abruptly	}	end of extent
:	lengthening	C	creak
(.)	pause (<.> c. 0.2s)	W	whispery
(0.5)	measured pause of 0.5s	H	voiceless
h	exhalation	all	faster than surrounding talk
.h	inhalation	l	slower than surrounding talk
()	transcriber uncertainty	f	louder than surrounding talk
(())	transcriber's comment	p	quieter than surrounding talk

Principles of glossing.

(Conventions adapted from Marja-Leena Sorjonen's work, eg. Sorjonen 1996.) The following forms are treated as unmarked and not indicated in the glossing: (i) nominative (ii) singular (iii) active voice (iv) present tense (v) 2SG imperative.

Case	Abbr'n	Approx. meaning		
ablative	ABL	off, from	ADV	adverb
accusative	ACC	object	CLI	clitic
adessive	ADE	at, on	COM	comparative
allative	ALL	on to, to, for	COMP	complementiser
essive	ESS	as	CON	conditional
genitive	GEN	possession, object, subject	IMP	imperative
elative	ELA	out of, about	INF(1-4)	infinitive (one of four forms)
illative	ILL	into, for	NEG	negation (= auxiliary verb)
inessive	INE	in	PAS	passive
instructive	INS	with, by	PC	participle
nominative	NOM	subject, object	PL	plural
partitive	PAR	'some', subject, object	POS	possessive suffix
translative	TRA	new state	PPC	past participle
			PPPC	passive past participle
			PRT	particle
1	first person		PST	past tense
2	second person		Q	interrogative
3	third person		SG	singular
4	impersonal		SUP	superlative

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