"Potential Music"

Composed by: Anders Vinjar. Lyrics by Beate Grimsrud
Instrumentation: mezzo-soprano, electronics & post-modern audience
Keywords: musical entropy, *un*certainty as a guarantee for freedom, the creative subject, boarders for a piece of art, Shannon, information-theory

"Potential Music" works with classical problems related to human communication and the boundaries surrounding a work of art. The piece balances on a narrow line between order & chaos, where messages on one side is in danger of being appreciated as *obvious and general statements*, and on the other hand being *incomprehensible* out of lack of common references.

This piece of art gets its form as it wanders along the communication-chain:

Composer ⟶ Interpreter ⟶ Audience

— and the *receiver*'s (audience) role in defining what constitutes a piece of art gets focused on.

Whether it's at all possible? — about musical entropy

Art possesses a special function in society, one of its valuable aims is to ask questions *not necessarily possible to answer*, and maybe *not even possible to understand*. We need the Arts *uncertainty* among other reasons out of a comprehension that each and all of us basically *stand alone*. Communication is in the end *only a possibility* — no human can claim to have an understanding of a truth with guaranteed validity for any other. Paradoxically this uncertainty guarantees *a basic freedom* and an accompanying *responsibility* for each individual.

Basic Solitude

This piece of music optimistically asks a broad range of *potential* questions, and the piece guarantees any one full freedom to choose their own answers.

One necessary precondition for communication is that information finds a place inside certain *categories*, and the Arts are an important factor in the development and adjustment of the categories we use to comprehend reality slightly better as we go.

A musical expression exists along an *entropy scale*, where the placement is dependent on the degree of cognitive structure and predictability it possesses. To the extent that the musical categories brought to use are predictable and general they may mediate *one certain* musical message. *Negative entropy* is put to use where the audience as part of the *listening process* constructs connections, perspective, expectations and comprehension in unpredictable material.

Negative Entropy

Are we talking about the same thing? The piece in time and space

The composing of this piece started by programming a system for **algorithmic composition** based on certain musical archetypes. This system was put into use to generate a musical raw-material, and to construct the system for interactive processing of audio and video. It was designed to guarantee a rich and free outset, not restricted by limitations in the composers fantasy.

Algorithmic Composition

The choice of general categories in such a system may too easily direct the audience towards specific places in *time and space* (existing repertory and style). To get by these restriction very *basic* musical categories were used — mostly gotten from research in ethnomusicology, where they are used to treat general aspects of human musicianship.[1]

The **Composer** takes this material and brings it further. *Choices, adjustments, copies, permutations* — and gives the piece its form. The form of this piece resembles what's common in cinema or visual Arts. A *non-linear or cinematographic* story-telling lies as the basis for the development and exposure of the elements of the piece. This process results in 2 objects: the mezzo-sopranos score, and the programs for treatment of audio and video during performance.

The Composer

While **performing** the piece the singer and the electronics together form the piece even further. The processing during the performance is directed by *stochastic methods* — random process with varying degrees of probability controlled by lookup in the general archetypes lying as the basis of the piece.

The Performance

The material for the electronics is live-recording of the singer. The signal-processing-routines are controlled stochastically and result in sound and video with varying degrees of resemblance to the original — as a direct representation of the human singer on one end, to a free *sound-object* or graphic object at the other end. The resulting audio- and video-stream is lead back into the system, and results in further layers of uncertainty between the piece of music and the audience.

The performer's **physical presence** is integrated into the piece — and becomes part of it — when recordings of her gets manipulated by the system and projected back on the stage she appears on. Also the limit between the acoustic and the visual domain is questioned, by having the manipulation and projection of the video-signal controlled by analysis of the sound. The mezzo-soprano, the electronic processing of sound and video-projection delivers something with *potential to become Art* once it reaches the audience.

Finally the stream of musical information reaches the *audience*. As part of the audience's listening-process, a degree of *negative entropy* will take place in the construction of connections, perspective and understanding in a material with a prevalent amount of uncertainty. In the end what makes up the piece it the audiences ability to *conceptualize* order in the world. The piece has no definition before it reaches the audiences brain, after each listener has used its own cognitive abilities on the information streaming towards them in the concert hall.

The audience

[1] Bearing names like *"Thumbling strains"*, *"Two-Note Melodies"*, *"Attacks"* etc.

“Potential Music” — comments to the score

Time and rhythm

Time, rhythm and duration is partly *proportionally* and partly *traditionally rhythmically* notated.

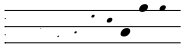
- **proportional notation** is marked by **0** as measure-sign. The duration of one staff notated in proportional manner is **12 seconds**. The musical elements time and duration is given by *horizontal placing* and *duration brackets*
- **rhythmical notation** is marked by traditional notation of meter, tempo, rhythm and duration.

Pitch

Pitch is notated in 3 manners:

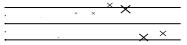
1. 5-line staffs for traditional notation of sung pitch and intervals, as well as *“sprechgesang”*
2. 3-line staffs indicates *relative* placement and movement in singers *register*, as well as *“sprechton”*
3. 1-line staff for unvoiced sounds without any specific placement in pitch or register, as well as normal speech

Nomenclature

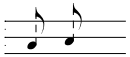


Ultrashort, “explosive” *voiced* syllables on marked place in register – size indicates dynamics

likewise, but with emphasized *breathy* voice

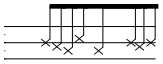


likewise, but with *unvoiced* syllables

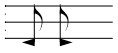


dotted stem indicates *whisper*

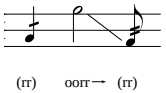
Significant *airy* voice on indicated pitch



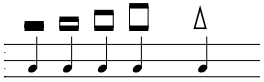
unvoiced sound (indicated in lyrics)



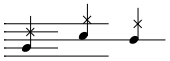
sung on *in*- and *out*breath



Tremolo on indicated sound. Number of slashes indicates relative tremolo-speed

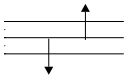


mouth-position — from *closed* to *wide open*, triangle indicates *nasal* character

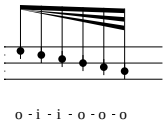


The cross across stem indicates varying categories of voice→song:

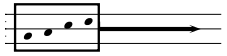
- *“sprechgesang”* is notated on 5-line staff
- *“sprechton”* (closer to speech, with indication of intonation) is notated on 3-line staff
- plain *speech* is notated on 1-line staff



Lowest and highest possible pitch within available register

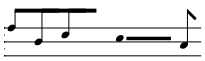


Bartok-bounce — even accellerando or rallantando, number of beams indicate start- and ending-speed

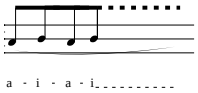


make random choice from pitches in framed box for indicated duration. Repeat first choice if frame occurs between repeat-signs

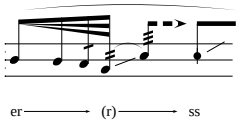
random choice of syllable or sounds from content in frame



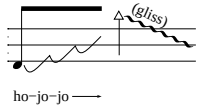
proportional notation: duration of *beams* (above staff or at level of note-head) indicates duration of note. A short, slanted beam from stem indicates *very short* duration



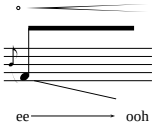
broken duration-beam: continue pattern for indicated duration



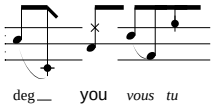
an *arrow* between values (lyrics, dynamics, singing-modes) indicates a *smooth & continuous transformation*



the thin line indicates *continuous pitch-variation* (portamento). Wavy-lines indicates portamento with *vibrato*



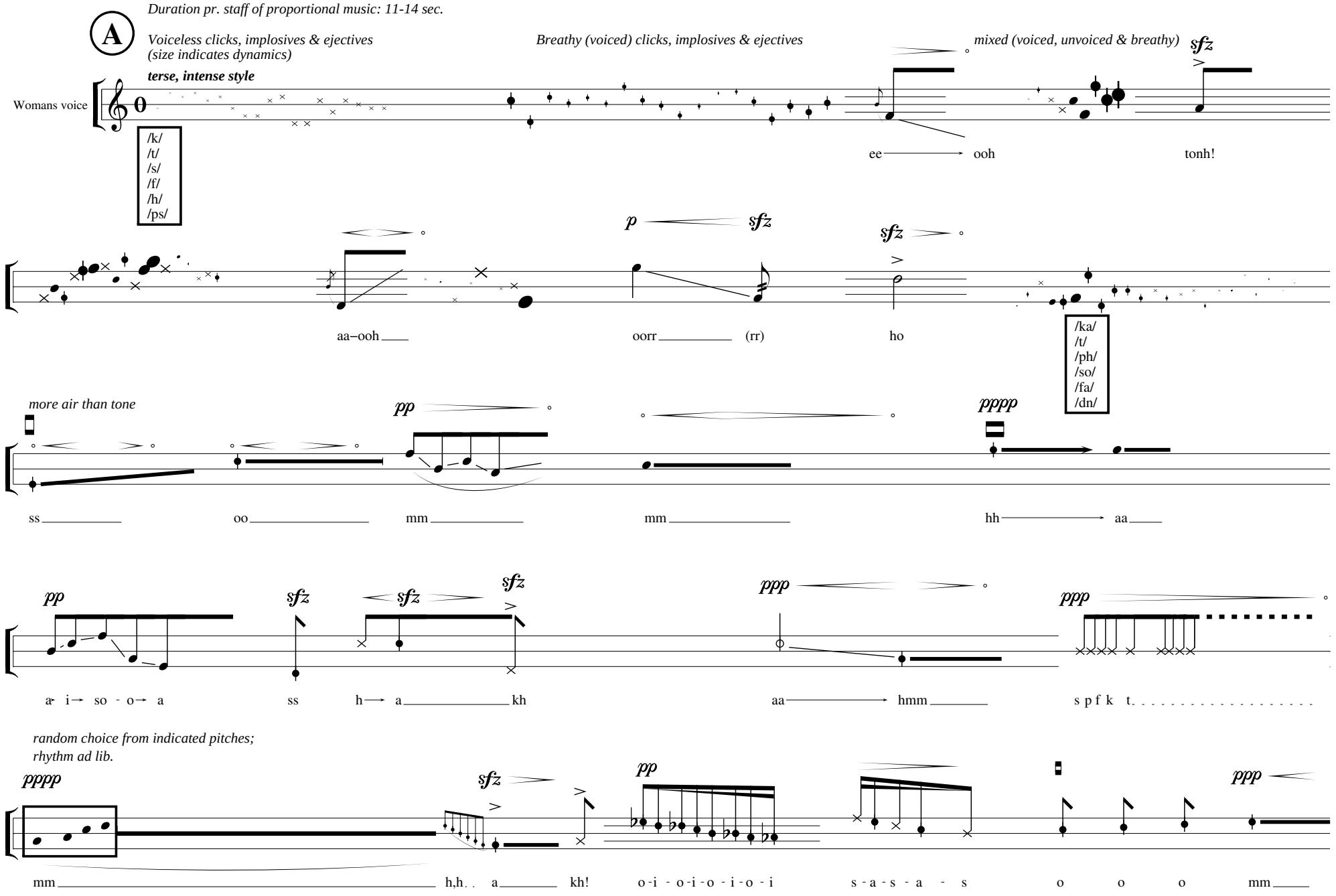
The circle in dynamics indicates *niente*. The line indicates portamento. All portamenti notated with straight line are performed with *even speed* (logarithmic)



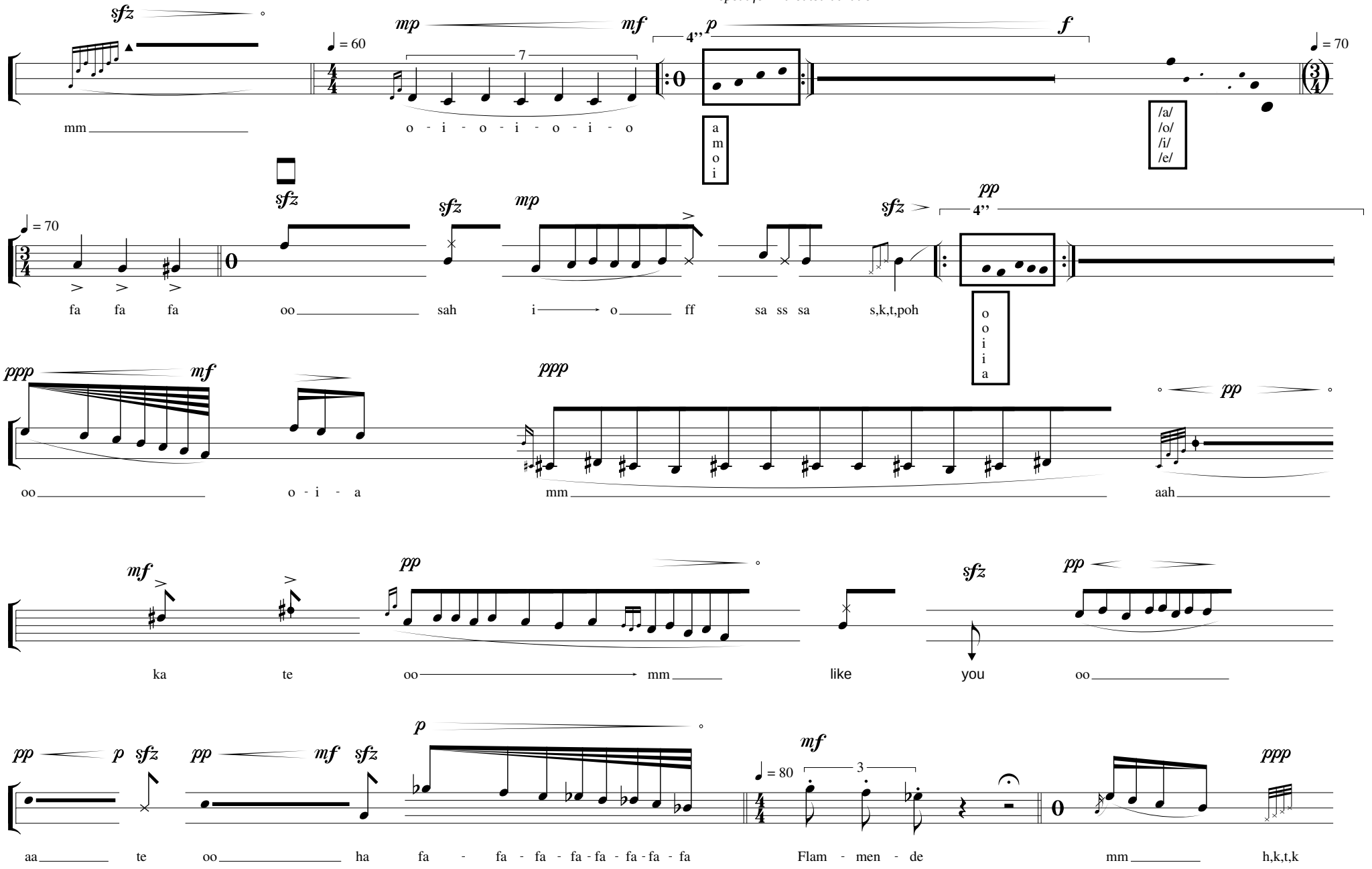
Lyrics in the piece are set in 3 different languages — Norwegian, English and *French* — and decides the pronunciation of words and sounds in the voice. The 3 languages are set apart in the lyrics by different fonts:

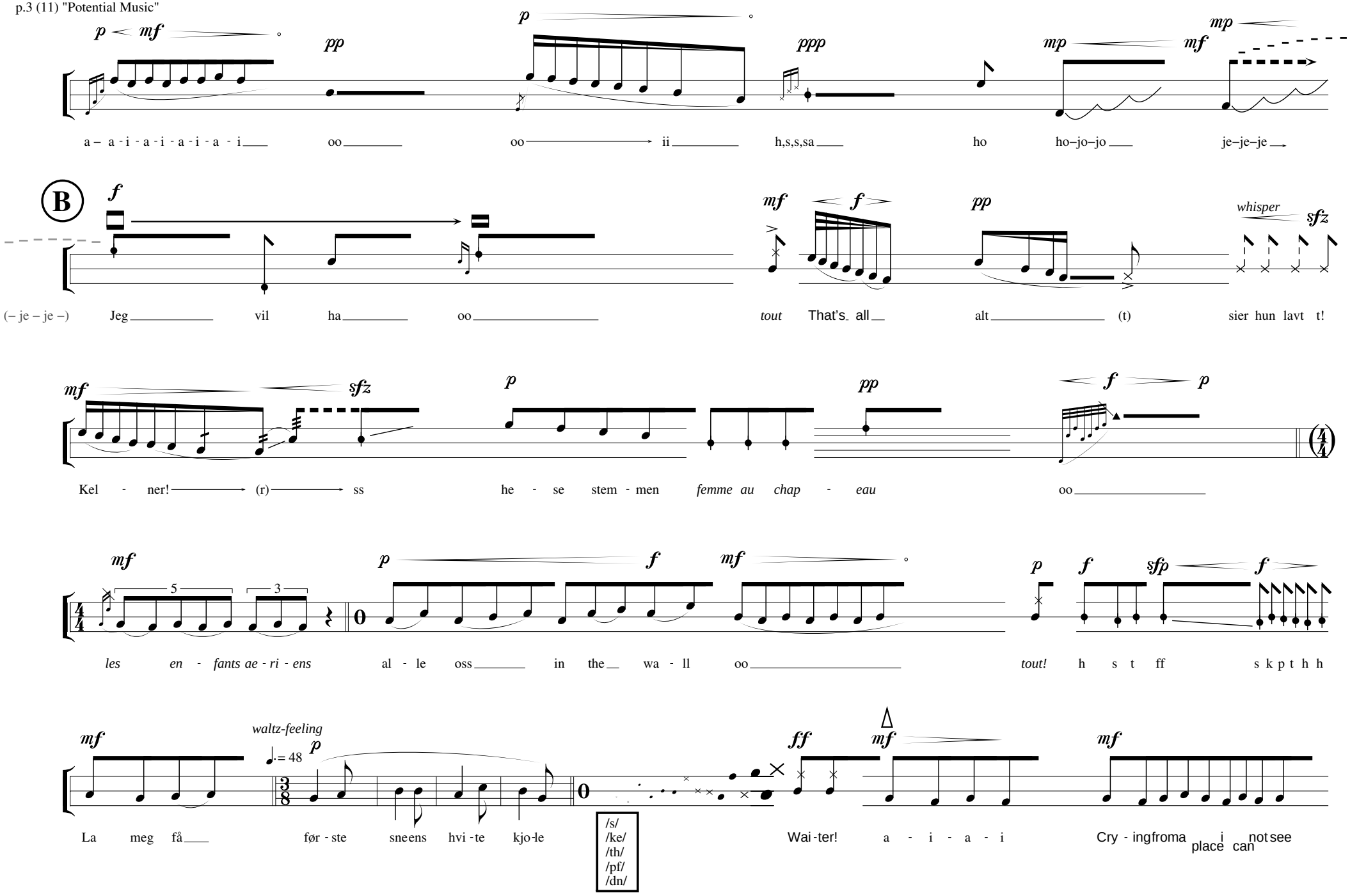
- **Norwegian** is notated with “Times-Roman”
- **English** is notated with “Helvetica”
- ***French*** *is notated with “Times-Italic”*

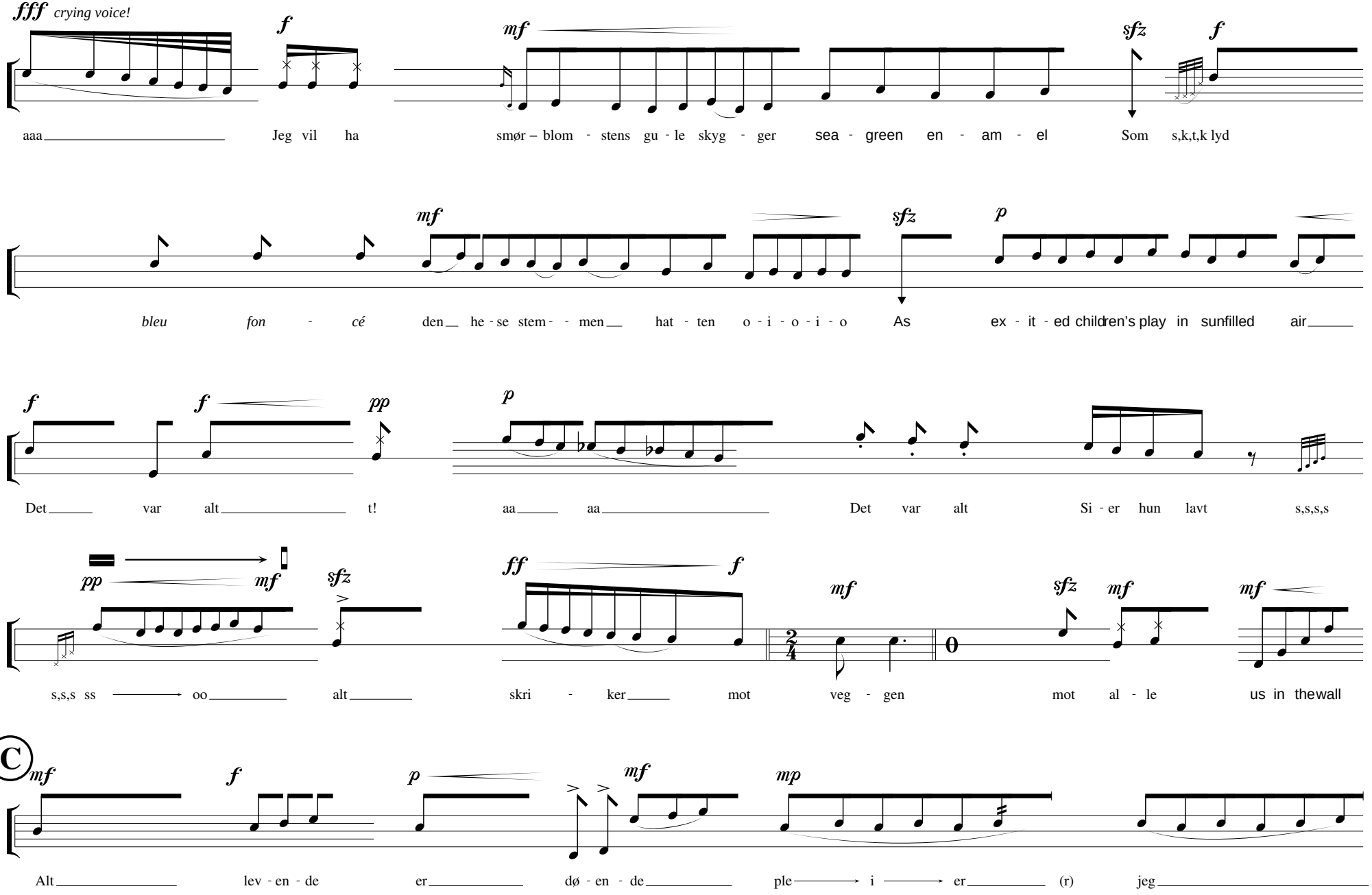
Potential Music

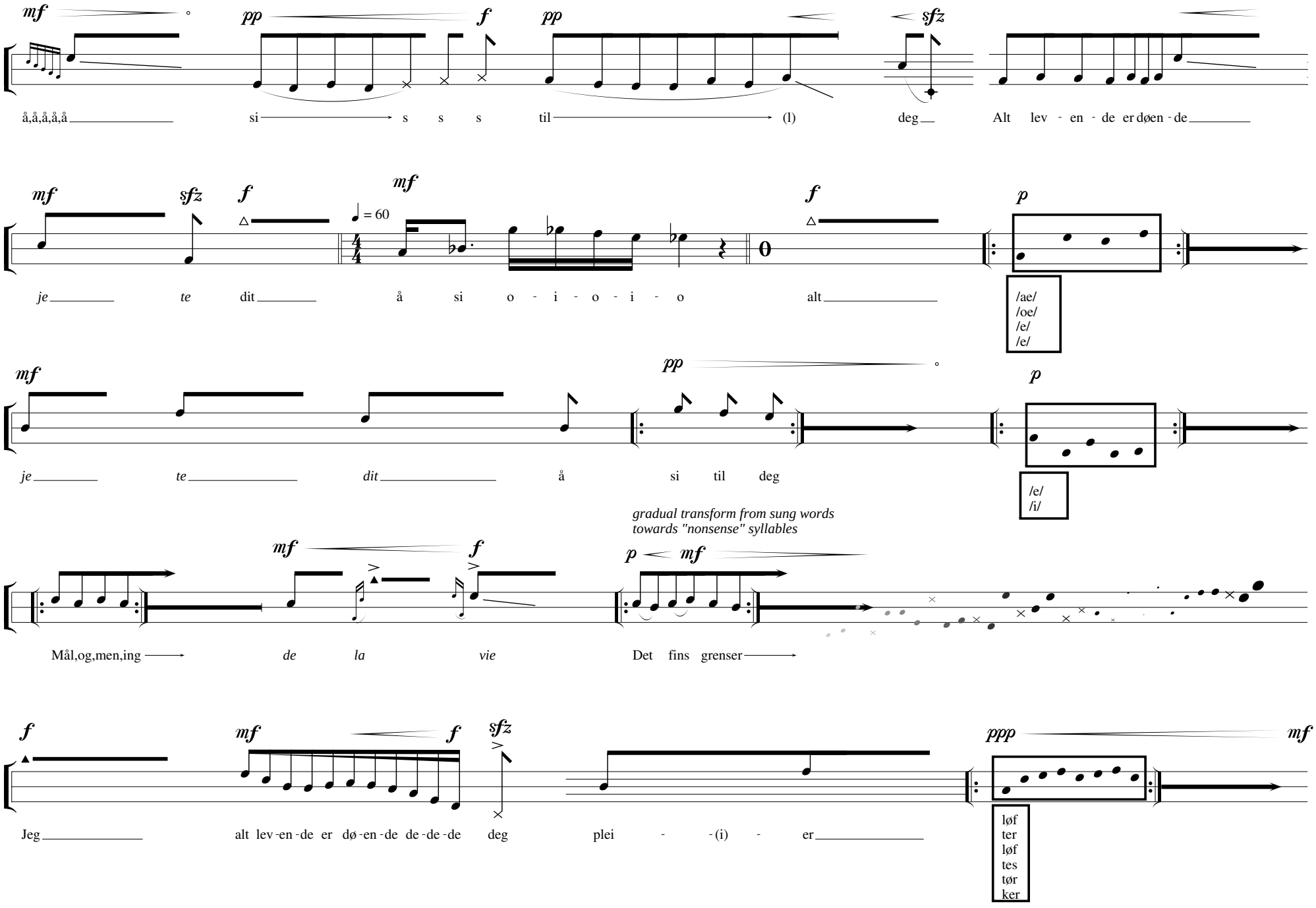


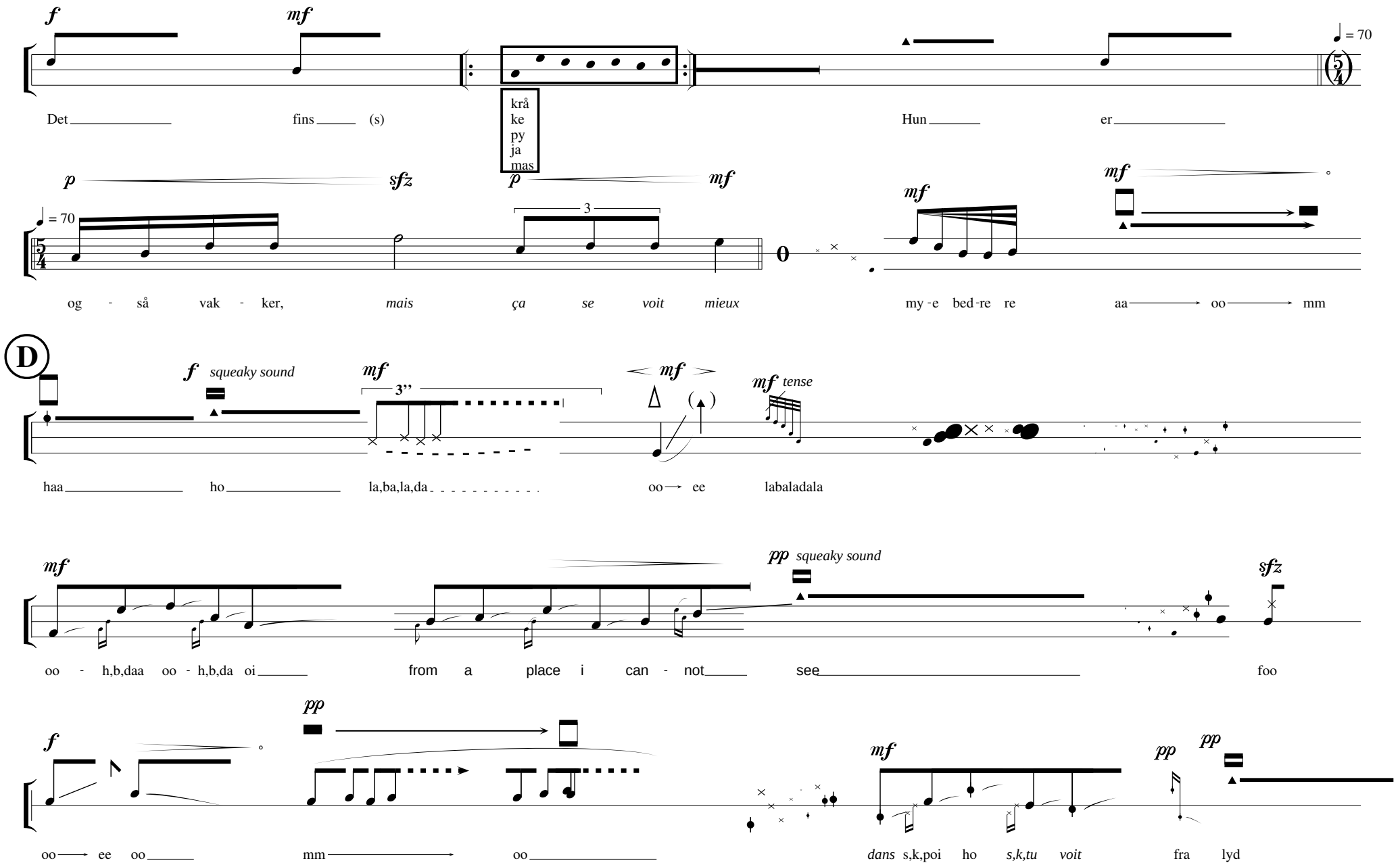
randomly pick 4-note figure to repeat for indicated duration

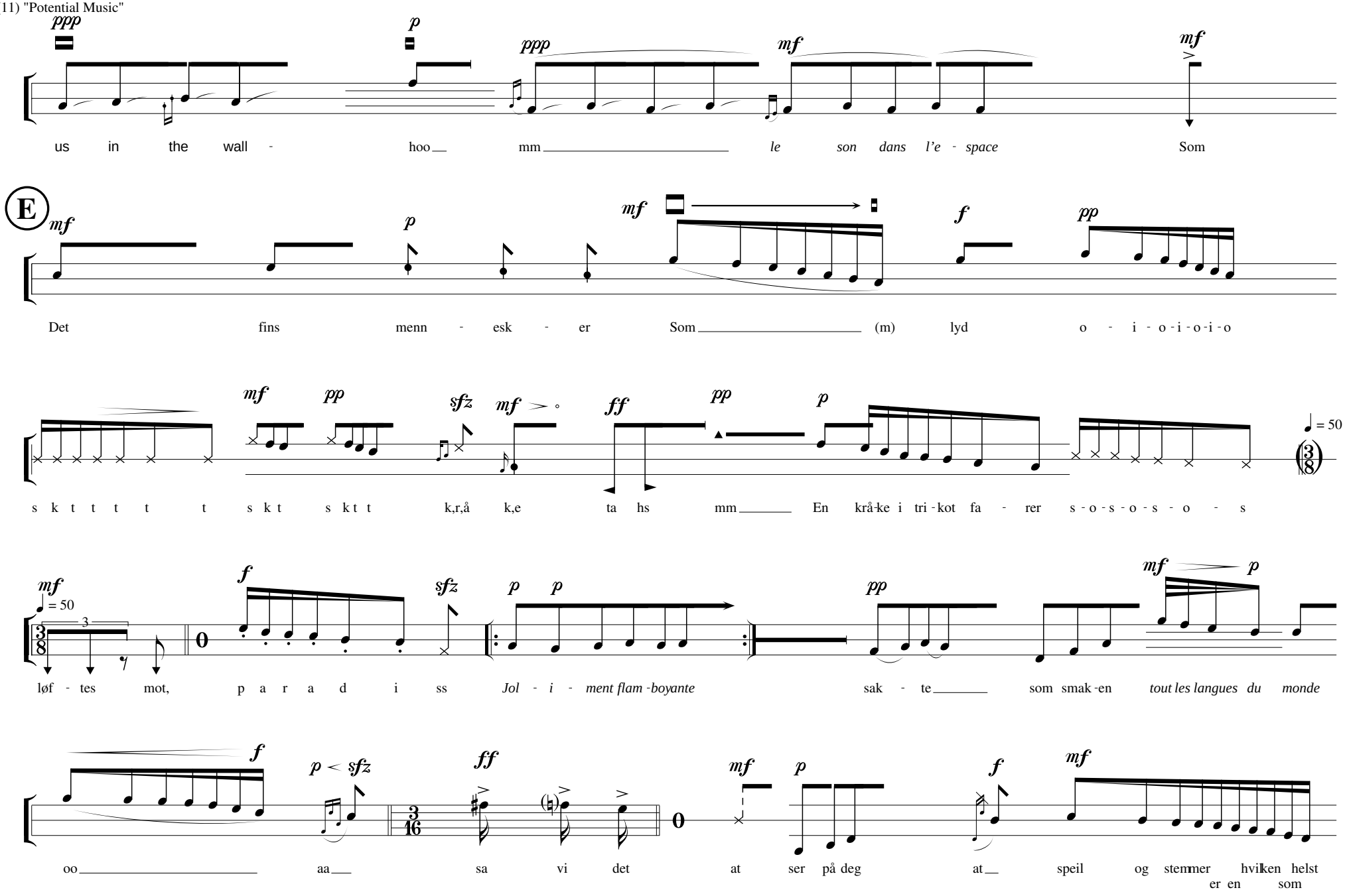


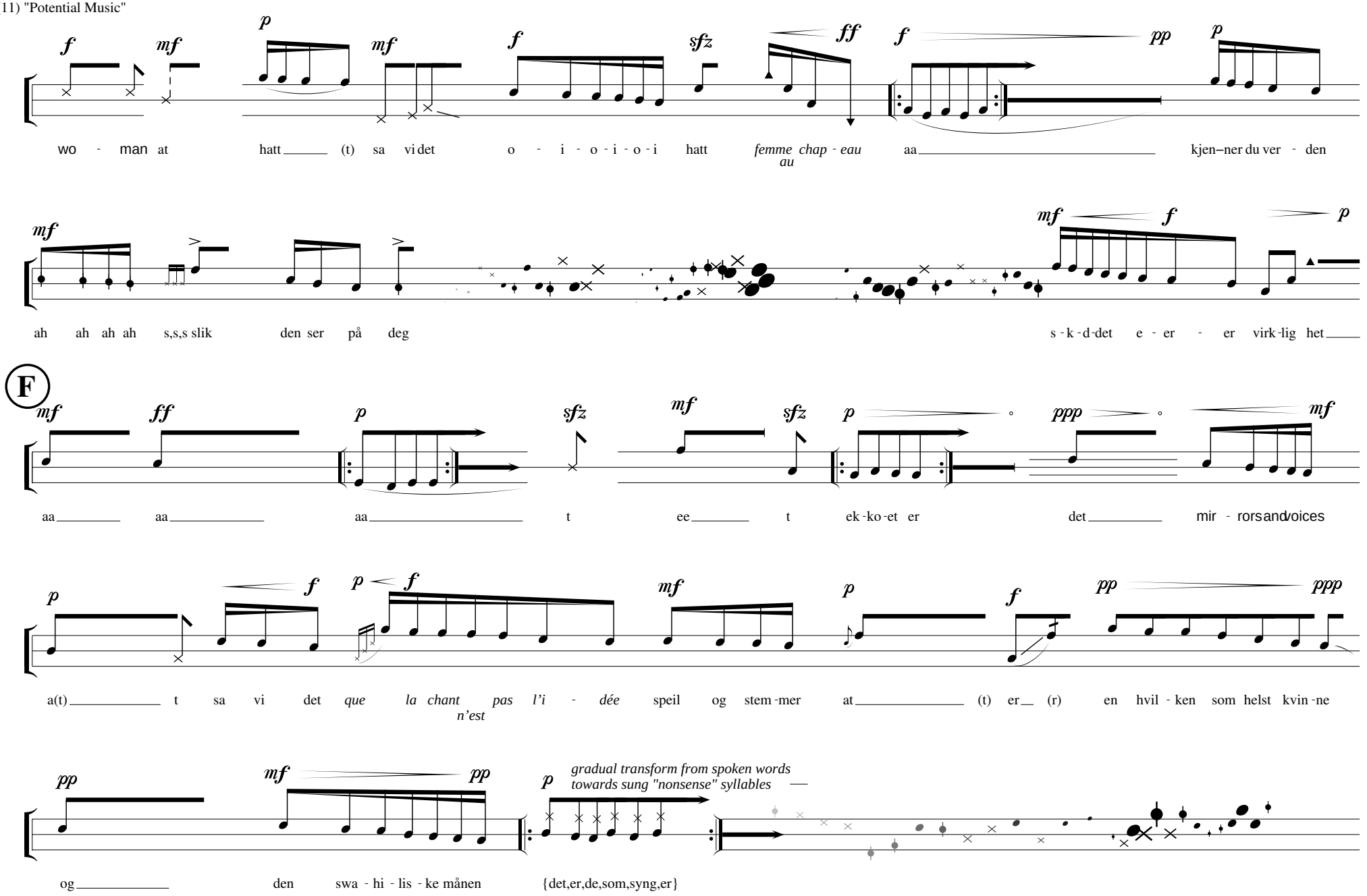

p mf pp p ppp mp mf mp
a – a - i - a - i - a - i - a - i oo oo ii h,s,s,sa ho ho–jo–jo je–je–je
B f mf f pp whisper sfz
(– je – je –) Jeg vil ha oo tout That's all alt (t) sier hun lavt t!
mf sfz p pp f p
Kel - ner! (r) ss he - se stem - men femme au chap - eau oo
mf p f mf p f sfp f
5 3
les en - fants ae - ri - ens al - le oss in the wa - ll oo tout! h s t ff s k p t h h
mf waltz-feeling ♩. = 48 p ff mf mf
La meg få før - ste sneens hvi - te kjo - le /s/ /ke/ /th/ /pf/ /dn/ Wai - ter! a - i - a - i Cry - ingfroma i notsee
place can

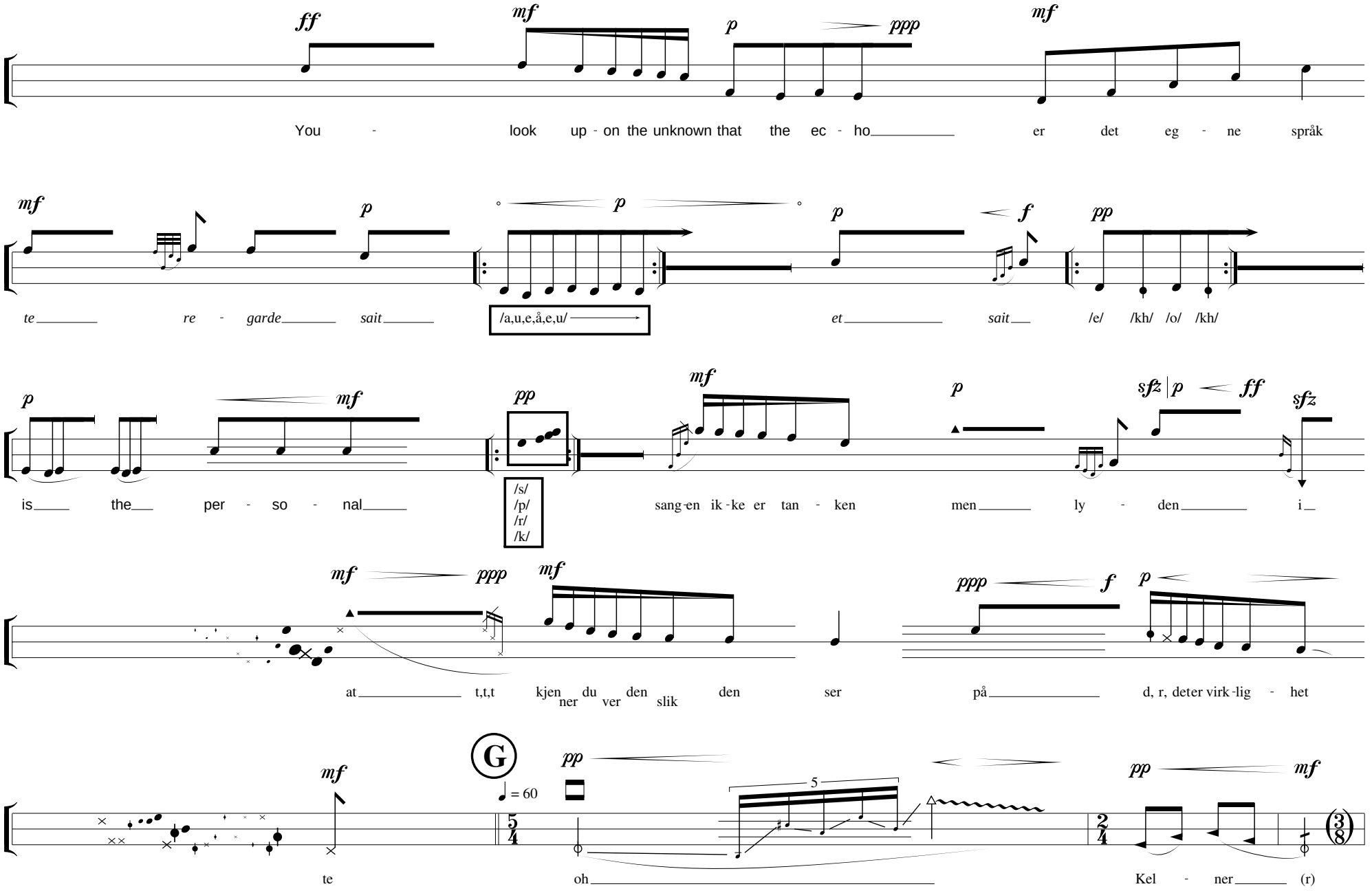

fff crying voice!
f
mf
sfz
f
aaa Jeg vil ha smør – blom - stens gu - le skyg - ger sea - green en - am - el Som s,k,t,k lyd
mf
sfz
p
bleu fon - cé den he - se stem - - men hat - ten o - i - o - i - o As ex - it - ed children's play in sunfilled air
f
f
pp
p
Det var alt t! aa aa Det var alt Si - er hun lavt s,s,s,s
pp
mf
sfz
ff
f
mf
sfz
mf
mf
s,s,s ss oo alt skri - ker mot veg - gen mot al - le us in thewall
C
mf
f
p
mf
mp
Alt lev - en - de er dø - en - de ple i er (r) jeg

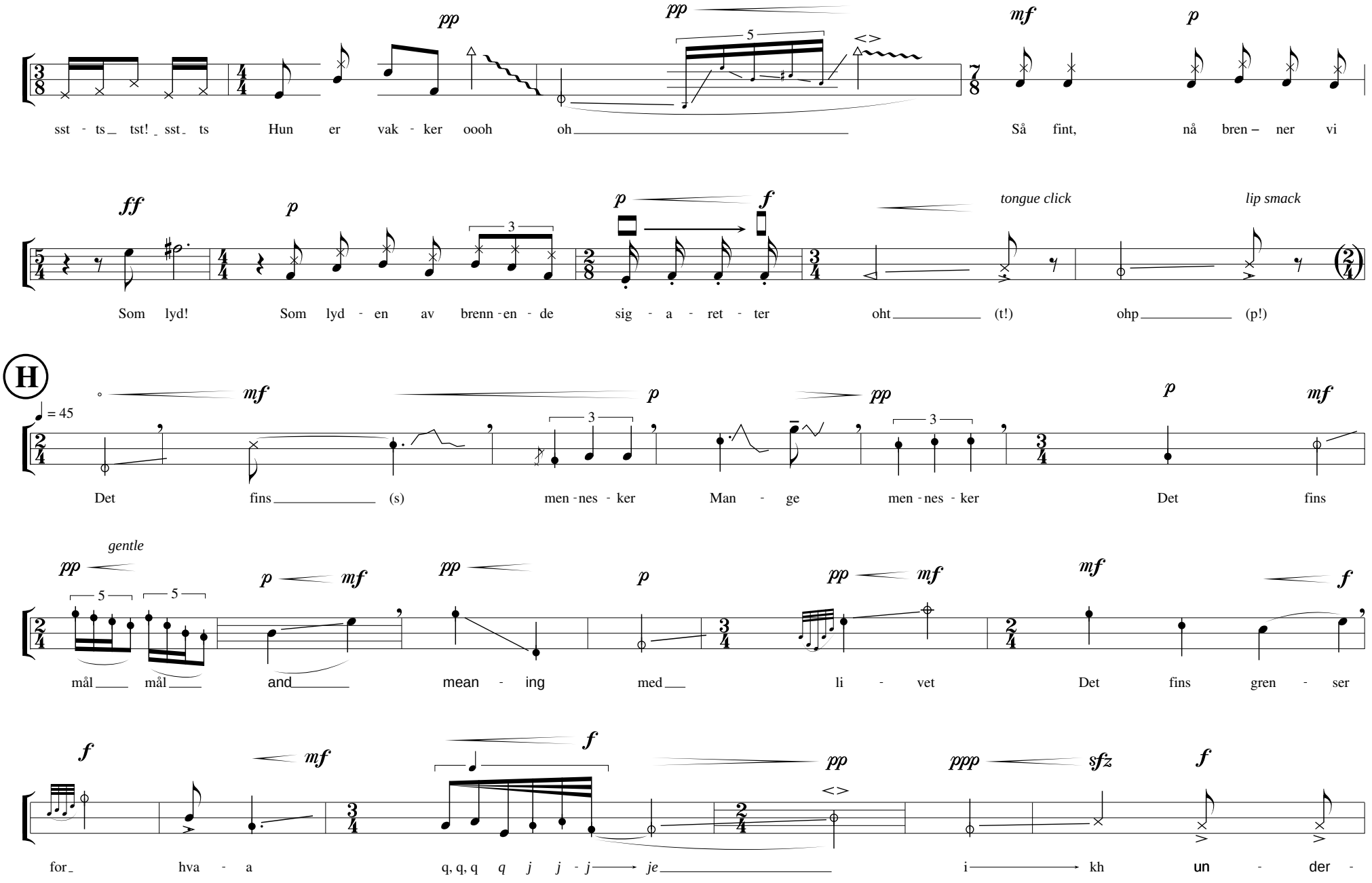

mf
pp
f
pp
sfz
å,å,å,å,å
si
s s s
til
(l)
deg
Alt lev - en - de er døen - de
mf
sfz
f
mf
= 60
f
p
je
te
dit
å si o - i - o - i - o
alt
/ae/
/oe/
/e/
/e/
mf
pp
p
je
te
dit
å si til deg
/e/
/i/
gradual transform from sung words
towards "nonsense" syllables
mf
f
p
mf
Mål,og,men,ing
de la vie
Det fins grenser
f
mf
f
sfz
ppp
mf
Jeg
alt lev-en-de er dø-en-de de-de-de deg
plei - -(i) - er
løf
ter
løf
tes
tør
ker

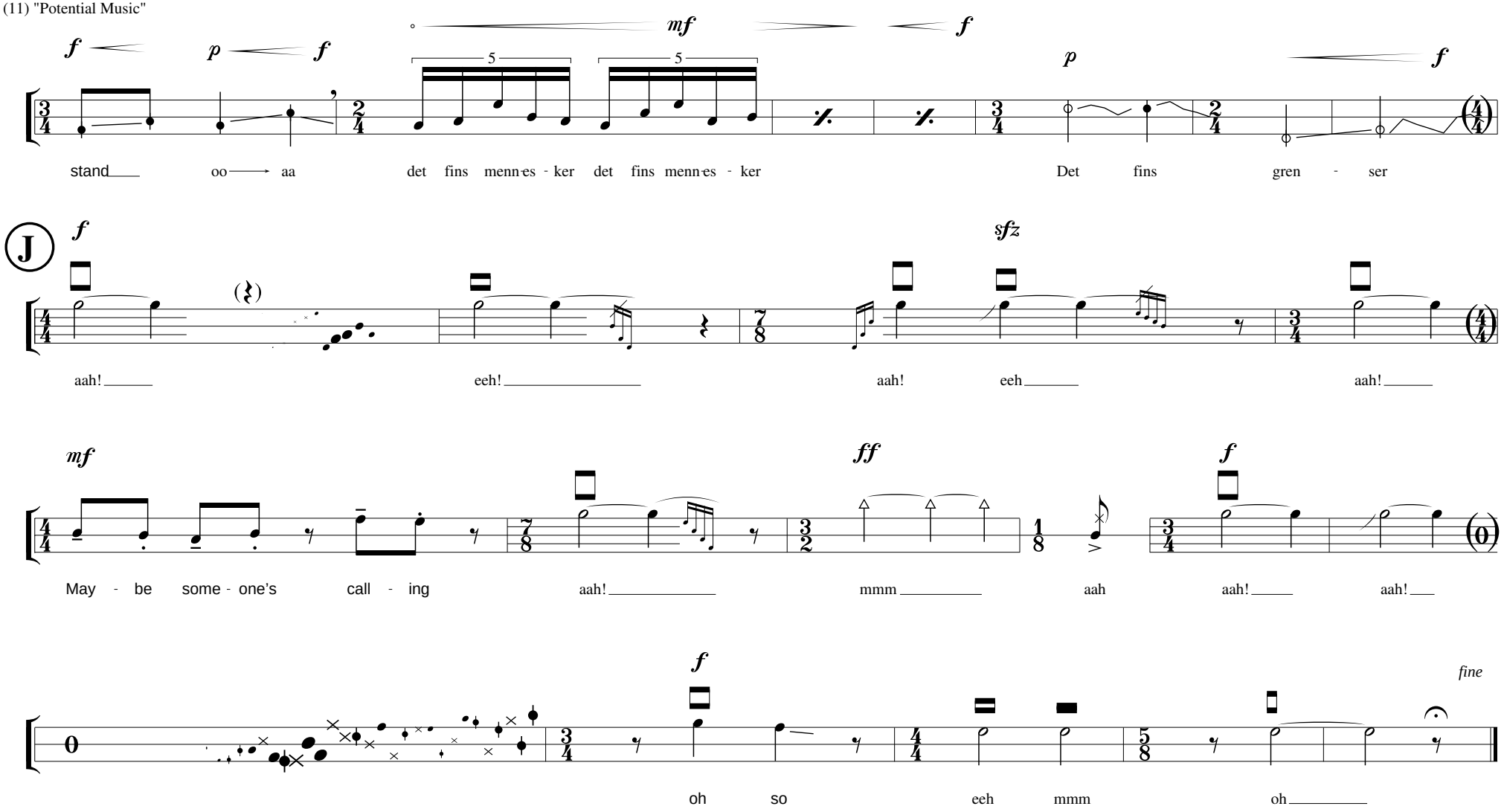

f
mf
= 70
Det
fins (s)
krå
ke
py
ja
mas
Hun
er
p
sfz
p
mf
= 70
3
mf
mf
og - så vak - ker,
mais
ça
se
voit
mieux
my - e bed - re re
aa oo mm
D
f squeaky sound
mf
3"
mf
mf tense
haa ho
la,ba,la,da
oo ee
labaladala
mf
pp squeaky sound
sfz
oo - h,b,daa oo - h,b,da oi
from a place i can - not
see
foo
f
pp
mf
pp
pp
oo ee oo
mm
oo
dans s,k,poi ho
s,k,tu
voit
fra lyd


ppp p ppp mf mf
us in the wall - hoo__ mm__ le son dans l'e - space Som
E mf p mf f pp
Det fins menn - esk - er Som__ (m) lyd o - i - o - i - o - i - o
mf pp sfz mf ff pp p
s k t t t t t s k t s k t t k,r,å k,e ta hs mm__ En krå-ke i tri-kot fa - rer s - o - s - o - s - o - s
= 50
mf f sfz p p pp mf p
= 50
løf - tes mot, p a r a d i ss Jol - i - ment flam - boyante sak - te__ som smak-en tout les langues du monde
f p sfz ff mf p f mf
oo__ aa__ sa vi det at ser på deg at__ speil og stemmer hvilken helst er en som


wo - man at hatt (t) sa vi det o - i - o - i - o - i hatt femme au chap - eau aa kjen–ner du ver - den
ah ah ah ah s,s,s slik den ser på deg s - k - d - det e - er - er virk - lig het
F
aa aa aa t ee t ek - ko - et er det mir - rors and voices
a(t) t sa vi det que la chant pas l'i - dée n'est speil og stem - mer at (t) er (r) en hvil - ken som helst kvin - ne
og den swa - hi - lis - ke månen {det,er,de,som,syng,er}
gradual transform from spoken words towards sung "nonsense" syllables


ff
mf
p
ppp
mf
You - look up - on the unknown that the ec - ho er det eg - ne språk
mf
p
p
p
f
pp
te re - garde sait
/a,u,e,å,e,u/
et sait
/e/ /kh/ /o/ /kh/
p
mf
pp
mf
p
sfz
p
ff
sfz
is the per - so - nal
/s/
/p/
/r/
/k/
sang-en ik-ke er tan - ken
men ly - den i
mf
ppp
mf
ppp
f
p
at t,t,t kjen ner du ver den slik den ser
på d, r, deter virk-lig - het
G
mf
pp
= 60
5
pp
mf
te
oh
Kel - ner (r)


pp
pp
mf
p
5
sst - ts tst! sst ts
Hun er vak - ker oooh
oh
Så fint,
nå bren – ner vi
ff
p
p
f
3
tongue click
lip smack
Som lyd!
Som lyd - en av brenn - en - de
sig - a - ret - ter
oht (t!)
ohp (p!)
H
= 45
mf
p
pp
p
mf
3
3
Det fins (s)
men - nes - ker
Man - ge
men - nes - ker
Det fins
gentle
pp
p
mf
pp
p
pp
mf
mf
f
5
5
mål mål
and
mean - ing
med
li - vet
Det fins gren - ser
f
mf
f
pp
ppp
sfz
f
for
hva - a
q, q, q q j j - j je
i kh
un - der -


f
p
f
mf
f
5
5
p
f
stand oo aa det fins menn-es - ker det fins menn-es - ker Det fins gren - ser
J
f
sfz
aah! eeh! aah! eeh aah!
mf
ff
f
May - be some - one's call - ing aah! mmm aah aah! aah!
f
fine
oh so eeh mmm oh