# it is impossible for everyone to achieve everything they want James Saunders / 2017

## **INSTRUMENTS**

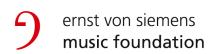
6 players, each with:

small synth
sample playback device (e.g. tablet, mobile phone, keyboard, control surface)
tape dictaphone
analogue radio
megaphone
small mixer
powered speaker
cabling

The samples are available from the composer on request.

duration: variable (c.10-15 minutes)





## **PROGRAMME NOTE**

it is impossible for everyone to achieve everything they want asks the players to construct sequences of sounds, responding to what they hear preceding players do. Players have control over their own actions, but generally not those of others. They can influence some behaviours but not control the group totally, although forming allegiances might enable more control to be exerted on the group. The piece uses a set of artificially constructed or presented sounds, including text-to-speech computer voices, recordings of real world sounds, algorithmically generated music, synthesisers, radio, dictaphones, and spoken commands delivered over megaphones. The title is taken from Larry Diamond's text 'What is Democracy?' (2004).

it is impossible for everyone to achieve everything they want was commissioned by Matrix New Music Centre, funded by the Ernst von Siemens Musical Foundation for the 2018 Nadar Academy. It was first performed by Nadar Summer Academy Ensemble at Transit Festival, Leuven, on 13 October 2018.

## **SETUP**

Each player needs a keyboard, sample playback device, megaphone, tape dictaphone and radio.

The keyboard and sample playback device should be routed to a mixer, then to a local speaker. If the performance space is large, the dictaphone and radio could also be routed to the mixer, but it is preferable to use their internal speakers.

The megaphone should not be routed to the mixer.

Keyboard: this should be a small polyphonic synth, ideally with on-board sounds but an external module is also possible if necessary. All the keyboards should be identical and small, around the size of a melodica. Each keyboard should use a different synth/organ/pad sound, clearly artificial in its production: relatively quick onset to give a perceptible attack, and a fairly raw synth sound.

Sample playback: this could be a tablet, or a MIDI keyboard/control surface. Each of the sample playback devices should be prepared with the samples listed below. The synthesised speech, real world sounds, and DTMF tone samples should play through completely each time they are cued, then stop. The noise drones and algorithmic music should play while the trigger is held down, and stop on release.

Dictaphone: a tape dictaphone capable of record/playback at two speeds (normally 1.2/2.4 cm/s). The tape should be blank before the performance.

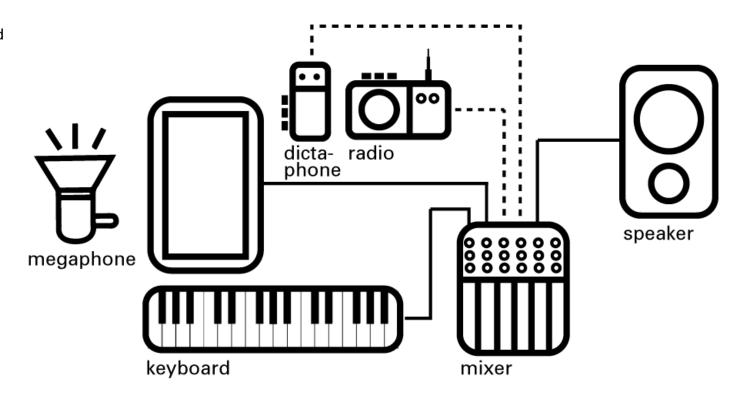
Radio: an analogue radio with multiple bands (SW/MW/LW/FM where possible) with dial tuning and volume controls (not buttons).

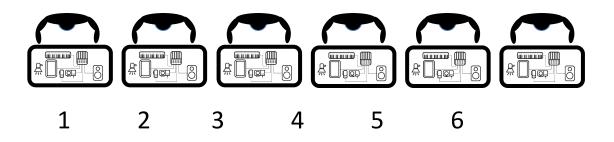
Megaphone: a simple megaphone, with volume control to manage the balance.

All players should be seated at tables, in a line as indicated. This can be curved slightly if necessary.

The layout of equipment on each table should be identical, but may differ from the suggested layout in the diagram if needed.

Sounds should be localised for each player rather than being played through a PA. The speakers should be placed on or under the tables, and need to be audible to the players for cueing purposes.





## SAMPLE SETUP

M1\_not.wav

The samples should be loaded onto the devices of each player as indicated below.

```
Player 1
alarm [120526__playpauseandrewind__alarm-clock-s-alarm-on].wav
indicator [195994 productionnow car-turn-signal-blinker-left-and-right].wav
chicken [371216 mrthenoronha cock-a-doodle-doo].wav
fire [91114 fasolt fire-crackling-oven].wav
glass [194685__kingsrow__breakingvase01].wav
sneeze [185619 organicmanpl sneeze].wav
thunder [265119 vpdavo rain-and-thunder-verandah].wav
typewriter [43559__tams-kp__typewriter19].wav
DTMF1.wav
DTMF7.wav
noise1.wav
noise2.wav
noise3.wav
noise4.wav
music1.NKM-G-95-31-176531883-0-99-184-138-8-2116-61-0-82-101-113-101-113-121-0-0-0-0-0.wav
music2.NKM-G-95-31-480347681-0-124-240-160-9-2194-55-0-87-109-14-108-0-0-0-0-0-0-0-wav
music3.NKM-G-95-31-509460466-0-194-180-120-9-3442-65-0-87-101-99-101-98-102-98-102-0-0-0.wav
music4.NKM-G-95-31-559039164-0-164-184-138-8-2772-64-0-99-109-13-110-0-0-0-0-0-0-0-wav
music5.NKM-G-95-31-562758040-0-113-240-160-9-2192-55-0-35-109-35-108-0-0-0-0-0-0-way
music6.NKM-G-95-31-854203917-0-116-207-138-9-2708-59-0-113-101-98-122-0-0-0-0-0-0.wav
M1 a severe storm.wav
M1_tore down.wav
M1 the barn.wav
M1 the blind man.wav
M1 counted.wav
M1 his old coins.wav
M1 a pink shell.wav
M1 was found on.wav
M1 the sandy beach.wav
M1 the hail.wav
M1 pattered on.wav
M1 the burnt brown grass.wav
M1 a stuffed chair.wav
M1 slipped from.wav
M1 the moving van.wav
M1_green ice.wav
M1 frosted.wav
M1 the punch bowl.wav
M1_the red paper.wav
M1_brightened.wav
M1 the dim stage.wav
M1 dots of light.wav
M1 betrayed.wav
M1 the black cat.wav
M1 and.wav
M1 or.wav
```

```
Player 2
ball1 [329684 __uzbazur345__plastic-bouncing-ball].wav
bell2 [219047 jarredgibb church-clock-strikes-1].wav
fireworks3 [347163 kinoton firework-single-rocket].wav
gun1 [217805 gattoangus 9mm-short-reverb].wav
pig1 [233182 jarredgibb pig-multiple-snorts-3-2-pigs-96khz].wav
racket2 [379335 13fpanska-marval-lukas tennis].wav
stream [275627 hanneswannerberger water-stream-river-sma].wav
wolf1 [256533__dkaufman__coyote-barks-and-howls].wav
DTMF2.wav
DTMF8.wav
noise5.wav
noise6.wav
noise7.wav
noise8.wav
music 7. NKM-G-95-31-927173326-0-220-180-120-9-2772-65-0-13-101-113-102-0-0-0-0-0-0. wav in the contraction of the contractio
music 8. NKM-G-95-31-1010337673-0-155-126-108-12-3276-61-0-13-102-91-901-0-0-0-0-0-0-0. wave the state of t
music9.NKM-G-95-31-1259946844-0-94-198-132-9-3156-60-0-13-109-86-108-0-0-0-0-0-0-0-way
music10.NKM-G-95-31-1259946846-0-96-198-132-9-3156-60-0-13-109-86-108-0-0-0-0-0-0-wav
music11.NKM-G-95-31-1610685484-0-811-180-120-9-3412-60-0-105-109-105-151-0-0-0-0-0-0-0-way
music 12. NKM-G-95-31-1636437295-0-36-203-152-8-3248-66-0-113-121-34-127-0-0-0-0-0-0. wave the substitution of the substitut
F1 a stuffed chair.wav
F1_slipped from.wav
F1 the moving van.wav
F1 green ice.way
F1 frosted.wav
F1 the punch bowl.wav
F1 the red paper.wav
F1 brightened.wav
F1 the dim stage.wav
F1_dots of light.wav
F1_betrayed.wav
F1 the black cat.wav
F1 a round mat.wav
F1 will cover.wav
F1 the dull spot.wav
F1 the knife.wav
F1 was hung inside.wav
F1 its bright sheath.wav
F1_the square peg.wav
F1_settled in.wav
F1 the round hole.wav
F1 a streak of color.wav
F1 ran down.wav
F1 the left edge.wav
F1 and.wav
```

F1 or.wav

F1\_not.wav

```
Player 3
burner [243763 nickpeeters gas-vuur-dakwerken-gasbrander-luchtballon].wav
cat1 [100030 nfrae beef-mow1].wav
clock1 [170383 finalcrystine cuckoo-clock].wav
door2 [155523__planet-leader__doorslam2].wav
drill4 [386248__ldezem__pneumatic-drill-desoutter-trough].wav
horse1 [149024 foxen10 horse-whinny].wav
telephone2 [38229__charliefarley__ringuk1965].wav
toilet1 [274448__polytest__toilet-flushing].wav
DTMF3.wav
DTMF9.wav
noise9.wav
noise10.wav
noise11.wav
noise12.wav
music13.NKM-G-95-31-2182827645-0-834-180-120-9-3412-60-0-105-109-105-151-0-0-0-0-0-0.wav
music14.NKM-G-95-31-2189957349-0-159-184-138-8-2772-64-0-99-109-13-110-0-0-0-0-0-0-0.wav
music15.NKM-G-95-31-2191005925-0-158-184-138-8-2772-64-0-99-109-13-110-0-0-0-0-0-0-wav
music16.NKM-G-95-31-2196277515-0-244-198-132-9-2386-72-0-101-102-87-129-113-102-0-0-0-0-wav
music17.NKM-G-95-31-2251177121-0-235-192-144-8-2708-63-0-89-102-87-169-98-111-0-0-0-0-0.wav
music18.NKM-G-95-31-3293711047-0-101-203-152-8-2196-64-0-116-121-87-127-0-0-0-0-0-0-0.wav
M2 a round mat.wav
M2 will cover.wav
M2 the dull spot.wav
M2 the knife.wav
M2 was hung inside.way
M2 its bright sheath.wav
M2_the square peg.wav
M2_settled in.wav
M2 the round hole.wav
M2 a streak of color.wav
M2 ran down.wav
M2 the left edge.wav
M2 the goose.wav
M2 was brought straight from.wav
M2_the old market.wav
M2 the kite.wav
M2 flew wildly in.wav
M2 the high wind.wav
M2 the dry wax.wav
M2 protects.wav
M2 the deep scratch.wav
M2 the beetle.wav
M2 droned in.wav
M2 the hot June sun.wav
M2 and.wav
M2 or.wav
M2 not.wav
Player 5
baby3 [393769__nektaria909__baby-cry].wav
buzzer1 [164089_hypocore_buzzer2].wav
cannon1 [187767 qubodup cannon-shot].wav
cow1 [233130 jarredgibb cow-moo-1-96khz].wav
donkey3 [246406 felix-blume donkeys-braying-at-the-market-of-assem-souk].wav
frog1 [344639__dbgrant__frogs].wav
saw1 [320734 papercutterjohn sawing-wood].wav
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siren2 [325280 adam-n sirens].wav

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Player 4
car1 [186959__readeonly__engine-start].wav
clap2 [267930 anagar clapping].wav
foghorn [265977 tim-kahn air-horn].wav
 gate1 [177194__barkenov__hard-grating-metal-gate].wav
laser1 [394919__navadaux__laser-gun].wav
owl2 [367964__bluedelta__owl-in-calm-environment-natural-reverb-4-channel-44khz].wav
scream3 [169811__missozzy__female-scream-02].wav
sheep2 [198118__photog123__hungrysheep].wav
DTMF4.wav
DTMF*.wav
noise13.wav
noise14.wav
noise15.wav
noise16.wav
music19.NKM-G-95-31-610209656-0-102-184-138-8-2116-61-0-82-101-113-101-113-121-0-0-0-0.way
music21.NKM-G-95-31-3027273609-0-214-126-108-12-3276-61-0-13-102-91-901-0-0-0-0-0-0-wav
music22.NKM-G-95-31-2340246981-0-162-126-108-12-3276-61-0-13-102-91-901-0-0-0-0-0-0-wav
music 23. NKM-G-95-31-1954816431-0-225-198-132-9-2386-69-0-101-102-108-129-113-102-0-0-0-0-0 wave the sum of the contraction 
music24.NKM-G-95-31-820125197-0-94-207-138-9-2708-59-0-113-101-98-122-0-0-0-0-0-0-wav
F2 the goose.wav
F2 was brought straight from.wav
F2 the old market.wav
F2 the kite.wav
F2 flew wildly in.way
F2 the high wind.wav
F2_the dry wax.wav
F2_protects.wav
F2 the deep scratch.wav
F2 the beetle.wav
F2 droned in .wav
F2 the hot June sun.wav
F2 light maple.wav
F2 makes for.wav
F2_a swell room.wav
F2 the child.wav
F2 crawled into.wav
F2 the dense grass.wav
F2 the dusty bench.wav
F2 stood by.wav
F2 the stone wall.wav
F2 the duke .wav
F2_left the park in.wav
F2_a silver coach.wav
F2 and.wav
F2 or.wav
F2 not.wav
 Player 6
```

Player 6
bicycle1 [120373\_\_faruku\_\_bycycle-rattle].wav
dog2 [328729\_\_ivolipa\_\_dog-bark].wav
duck1 [324087\_\_iggyf\_\_north-yorks-mallard-frenzy].wav
fly1 [352075\_\_kinoton\_\_house-fly-take-of-fly-by].wav
horn1 [54086\_\_guitarguy1985\_\_horn].wav
paper2 [181773\_\_keweldog\_\_tearing-paper4].wav
skid2 [104026\_\_rutgermuller\_\_tires-squeaking].wav
tape2 [151446\_\_tgfcoder\_\_ripping-unravelling-packaging-tape].wav

DTMF5.wav DTMF0.wav

noise17.wav noise18.wav noise19.wav

noise20.wav

$$\begin{split} & music 24. NKM-G-95-31-1954816431-0-225-198-132-9-2386-69-0-101-102-108-129-113-102-0-0-0-0-0. wav \\ & music 26. NKM-G-95-31-57005736-0-212-198-132-9-2386-72-0-101-102-87-129-113-102-0-0-0-0-0. wav \\ & music 27. NKM-G-95-31-57005736-0-212-198-132-9-2386-72-0-101-102-87-129-113-102-0-0-0-0-0. wav \\ & music 28. NKM-G-95-31-3762651297-0-146-203-152-8-3410-65-0-89-109-0-0-53-128-53-128-0-0-0. wav \\ & music 29. NKM-G-95-31-347541380-0-104-184-138-8-2116-61-0-82-101-113-101-113-121-0-0-0-0-0. wav \\ & music 30. NKM-G-95-31-3041144190-0-80-207-138-9-2708-59-0-113-101-98-122-0-0-0-0-0-0-0. wav \\ \end{split}$$

M3\_light maple.wav

M3\_makes for.wav

M3 a swell room.wav

M3 the child.wav

M3 crawled into.wav

M3\_the dense grass.wav

M3\_the dusty bench.wav

M3\_stood by.wav

M3 the stone wall.wav

M3 the duke.wav

M3 left the park in.way

M3 a silver coach.wav

M3 the black trunk.wav

M3 fell from.wav

M3 the landing.wav

M3 the room.wav

M3\_was crowded with.wav

M3\_a wild mob.wav

M3 the pipe.wav

M3\_ran almost the length of.wav

M3 the ditch.wav

M3 the ramp.wav

M3 led up to.wav

M3\_the wide highway.wav

M3\_and.wav

M3 or.wav

M3 not.wav

DTMF6.wav

noise21.wav noise22.wav noise23.wav noise24.wav

F3\_the black trunk.wav

F3\_fell from.wav

F3\_the landing.wav

F3 the room.wav

F3 was crowded with.wav

F3 a wild mob.wav

F3\_the pipe.wav

F3\_ran almost the length of.wav

F3 the ditch.wav

F3\_the ramp.wav

F3 led up to.way

F3 the wide highway.wav

F3 a severe storm.wav

F3\_tore down.wav

F3 the barn.wav

F3 the blind man.wav

F3 counted.wav

F3\_his old coins.wav

F3\_a pink shell.wav

F3\_was found on.wav

F3\_the sandy beach.wav F3\_the hail.wav

F3 pattered on.wav

F3 the burnt brown grass.way

F3\_and.wav

F3 or.wav

F3 not.wav

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The text-to-speech recordings were made using the voices provided in Google Cloud Text-to-Speech. For full information, please see <a href="https://cloud.google.com/text-to-speech">https://cloud.google.com/text-to-speech</a>.



The algorithmic music samples were generated using WolframTones. For full information and to generate your own sequences, please see <a href="http://tones.wolfram.com/generate">http://tones.wolfram.com/generate</a>

## **TEXT**

The text read by the text-to-speech computer voices is taken from the 1965 Revised List of Phonetically Balanced Sentences (Harvard Sentences),, a series of 72 blocks of 10 sentences, each of which contains all phonemes in spoken English. They were originally developed to test synthetic speech.

The following sentences are used in the piece:

A severe storm tore down the barn. The blind man counted his old coins. A pink shell was found on the sandy beach. The hail pattered on the burnt brown grass.

A stuffed chair slipped from the moving van.

Green ice frosted the punch bowl.

The red paper brightened the dim stage.

Dots of light betrayed the black cat.

A round mat will cover the dull spot.

The knife was hung inside its bright sheath.

The square peg settled in the round hole

A streak of color ran down the left edge.

The goose was brought straight from the old market.

The kite flew wildly in the high wind.

The dry wax protects the deep scratch.

The beetle droned in the hot June sun.

Light maple makes for a swell room

The child crawled into the dense grass.

The dusty bench stood by the stone wall.

The duke left the park in a silver coach.

The black trunk fell from the landing.

The room was crowded with a wild mob.

The pipe ran almost the length of the ditch.

The ramp led up to the wide highway.

## PERFORMANCE INSTRUCTIONS

The piece involves players acting in sequence, undertaking one of a set of actions when it is their turn.

The piece begins with player 1 making the first action, followed by player 2 and continuing until player 6 makes an action. Player 1 makes the next action following player 6. This sequence (1,2,3,4,5,6,1,2,3...) continues throughout, unless disrupted by one of the megaphone actions.

Players have personal autonomy over what they choose to do when it is their turn, but may decide based on the choices made by others. They may use their actions in a collaborative manner, or to disrupt the activities of others.

Sometimes groups of players may manage to co-ordinate their intentions, but the default is individual decision-making.

The choice of actions is free, but the following should be considered:

- the piece explores multitasking, cognitive load, and decision-making
- the general pace of the actions should be fast, although wide variation should be explored.
- players can vary the density and complexity of the sequences of actions, managing the difficulty of response for other players.
- repetition, patterning, or sequences of one action type might reduce the cognitive load on the responding players (reducing response times)
- do your best: sometimes things go wrong.

The piece ends when the players decide to stop making actions.

This requires a group understanding that the piece has concluded, but it may also result in a restart.

The approximate duration should be decided in advance, but it should last for approximately 10-15 minutes.

The following actions are possible:

#### 1. TEXT-TO-SPEECH COMPUTER VOICES / KEYBOARD CHORDS

Each player has six computer speech sentences, each comprising three noun / verb / noun samples (e.g. a stuffed chair / slipped from / the moving van), as well as the words 'and' 'or' and 'not'.

When it is their turn to make an action, the player may trigger a computer speech sample of their choice. Normally, this would involve playing a sample that fits the sentence pattern, substituting one part of each sentence for an equivalent one. This might result in a wide range of sentences produced by players as they respond to decisions made by others (similar to the games *Consequences* or *Exquisite Corpse*), for example:

a stuffed chair / slipped from / the moving van
a severe storm / tore down / the barn
a pink shell / was found on / the sandy beech
a stuffed chair / tore down / the sandy beech
a severe storm / was found on / the moving van
a pink shell / slipped from / the barn

It may however also create other sequences that make less sense:

the left edge / a round mat / green ice / will cover its bright sheath / and / the left edge / and / not / a round mat

For each noun cue (not verb cues, or and/or/not cues), three other players respond by playing a triadic chord on the keyboard as specified in their score.

If responding to a female voice, the chord is played in the highest possible octave available on the keyboard.

If responding to a male voice, the chord is played in the lowest possible octave available on the keyboard.

Chords should be played as quickly as possible after the cue is given,

The players respond independently and should not aim to play in rhythmic unison (although this might occur naturally). Sounds should be generally short.

Players do not have a response for all the cues, and do not have a response for any cues they give themselves.

The number of the player who gives each cue is indicated above the respective chord on the score.

#### 2. SAMPLES

Each player has a bank of samples which they may play back as an action. These are in different categories:

- tones: a selection of DTMF and beeps which are triggered as short sounds.
- noise drones: four environmental or electric equipment drones. These are started as a player action and sustained until a later action for the same player, at which point the drone may be terminated.
- real-world sounds: a set of eight samples of everyday sounds. These are triggered as short sounds.
- music: six short sequences of algorithmically-generated music

#### 3. DICTAPHONE

Players may operate their dictaphone to make recordings or play back these recordings.

This activity results in recordings of the performance being made, and played back either at approximately the same pitch, or approximately an octave lower at half speed.

When recording, it is advisable to record for longer durations than the anticipated playback. If playback of blank tape occurs though, just let it run until the dictaphone is stopped.

The three actions are:

- record: make sure the volume is set to maximum, the speed is 2.4cm/s, and the tape is rewound. Press record.
- play: set the volume to a pre-determined playback level for balance, ensure the tape is rewound. The speed can be either 1.2cm/s or 2.4cm/s. Press play
- stop/rewind: stop the recording or playback, and rewind the tape to the beginning.

When undertaking these actions, it is fine for the dictaphone buttons to click when pressed/released as this makes the action more explicit. Players may optionally choose to respond to previously recorded megaphone instructions when played back.

#### 4. RADIO

Players may operate their radios as an action.

Radios should be set in advance to an agreed volume for good balance throughout.

The four actions are:

- radio on: turn the radio on
- radio off: turn the radio off
- change band: switch from the current band to a different one (SW, MW, LW, FM)
- retune: retune the radio to a different frequency. Just rotate the dial a random amount and accept what comes out. Do not try to find any particular result (speech, music, interesting static etc.)

#### 5. MEGAPHONE CUES

Each player has verbal cues that can alter the sequence of actions. These are spoken through the megaphone.

- 'reverse': the sequence order reverses. For example, if the normal 1-2-3-4-5-6-1-2... sequence is taking place and player 4 gives a reverse cue, then this would become 1-2-3-4-3-2-1-6-5-4... Equally, if more than one player gives this cue in close proximity, the direction may change regularly, for example 1-2-3-4-3-2-3-4-5-6-5-4-5-6-1-...
- 'skip': the next player in the sequence is missed out, so that the player after them makes the next action (they miss a turn).
- 'delay': a player giving this cue delays their action and may undertake it at a later point, out of sequence

- spoken number (e.g. '5'): a player may say the number of one of the other players through the megaphone. This player makes the next action. So if player 4 says '1', then player 1 makes the next sound, rather than 5 (or 3) if following along the line. After the new player makes their action, the sequence continues in the initial order (1, 2, 3, 4, 5, 6...).
- 'all': all players may freely do any of their actions continuously until a new megaphone cue is given. This might involve operating any of the devices, playing back samples, or keyboard chords. This will be a more chaotic situation. It can be terminated by a megaphone cue (spoken number, 'stop')
- 'stop': all activity stops. This is a way to create a break, or reset more complicated situations if necessary (such as mistakes, points where more than one sequence is active etc). Following a stop cue, there should be a short pause, long enough for the interruption to register. Any player may restart a sequence by giving the next cue. This might create a more confusing situation.

# it is impossible for everyone to achieve everything they want

## / James Saunders / 2018

