

it is impossible for
everyone to achieve
everything they want

/ James Saunders

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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)

MATRIX
CENTRUM VOOR NIEUWE MUZIEK

 ernst von siemens
music foundation

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First performed by Nadar Summer Academy Ensemble at Transit Festival, Leuven, on 13 October 2018.

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).

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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.

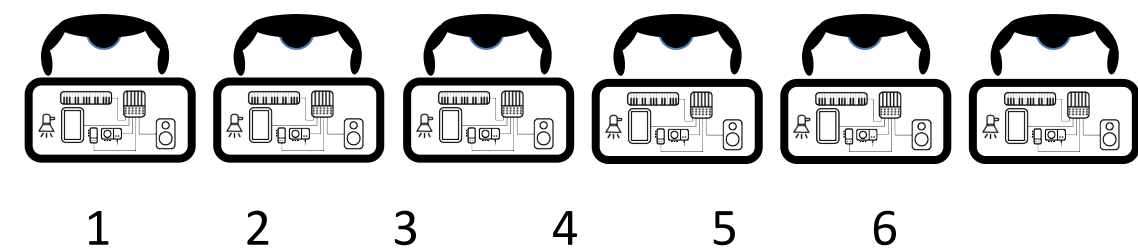
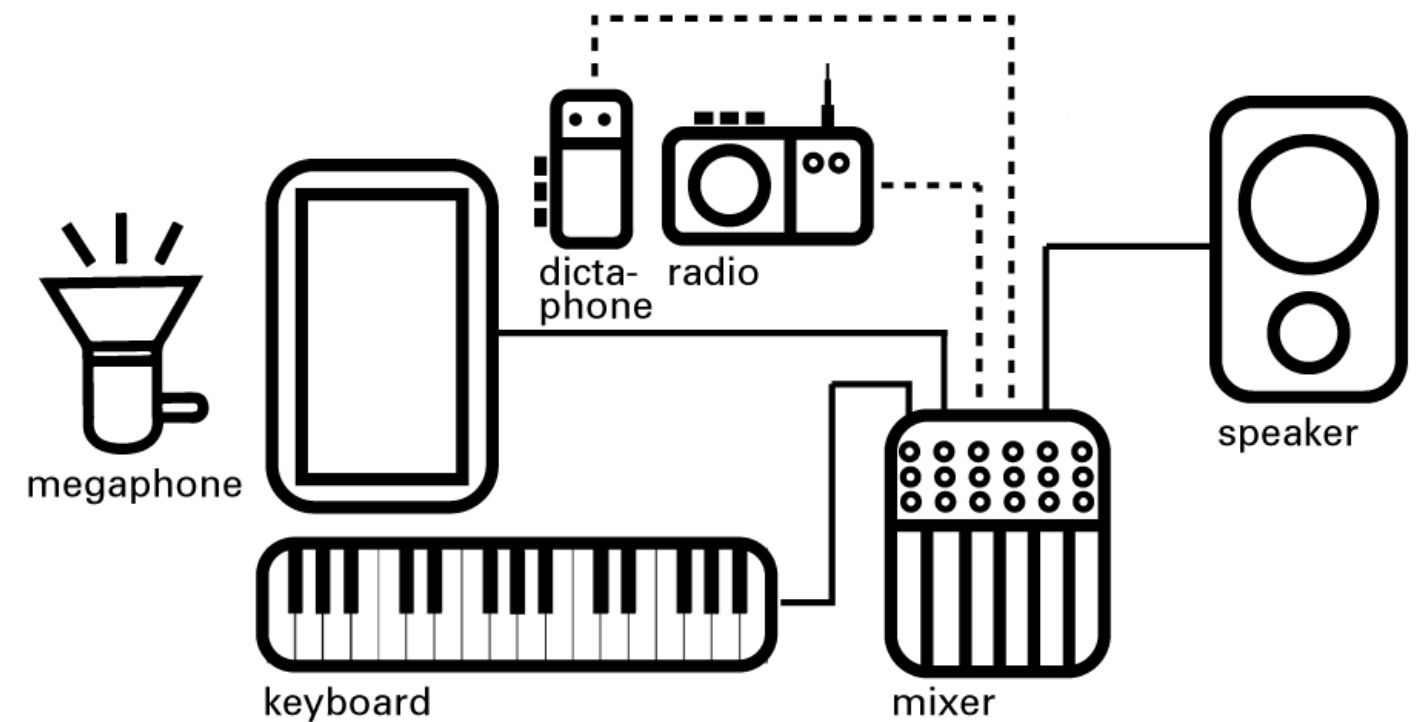
Radio: an analogue radio with multiple bands (SW/MW/LW/FM where possible) with dial tuning and volume controls (not buttons).

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.



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.

	a severe storm	the barn	the blind man	his old coins	a pink shell	the sandy beach
player 1						
player 2						
player 3						
player 4						
player 5						
player 6						

the hail

the burnt brown grass

a stuffed chair

the moving van

green ice

the punch bowl

player 1

player 2

player 3

player 4

player 5

player 6

the red paper

the dim stage

dots of light

a black cat

a round mat

the dull spot

player 1

③

③

player 2

player 3

①

①

①

①

player 4

① ②

① ②

① ②

① ②

②

②

player 5

① ②

① ②

① ②

① ②

③ ②

③ ②

player 6

②

②

②

②

③ ②

③ ②

the goose

the old market

the kite

the high wind

the dry wax

the deep scratch

player 1

③ ④

③ ④

③ ④

③ ④

③ ④

③ ④

player 2

④

④

④

④

④

④

player 3

player 4

player 5

③

③

③

③

③

③

player 6

③ ④

③ ④

③ ④

③ ④

③ ④

③ ④

