Click Nilson
Opus 11000000 (December 2012)

Six Live Coding Works for Ensemble

Suitable for contemporary music ensemble and/or improvisation group.

Acknowledging precedents from 1960s text pieces, through John Zorn's game pieces to Iannis Xenakis' use of game theory, and from Masahiro Miwa's 2007 Prix Ars Electronica winning reverse simulation music[1] or Halal Kebab Hut, to Ron Kuivila's 1985 FORTH live coding… rewriting the rulebook of contemporary music performance…

Note that these works may allow or be best suited to digital mediation in the dynamic live changing of the score state. If a digital intermediary is used (e.g., tablet computers on each stand) it may be possible to remove the intervening live coder, as the musicians themselves rewrite the rule set, or you could nevertheless continue to feature specialized live coding agents working via digital intervention rather than physical rewriting. You will need:

1) Some performers
2) At least one live coder as intervention agent. With appropriate training, there could also be one or more members of the audience issuing and modifying instructions.
3) Depending on the performance manner, card and pens, or computers (with optional projection). References to 'cards' below corresponding to system states/instructions can be replaced with a graphical or textual representation on a computer display.

Do not be afraid to modify these works; they will require individual preparation for your purposes, and if you are cautious about changing the rules, we'll never get anywhere.

A note on morals: The freedom to change rules in these works does not mean that these works encourage you to ignore basic principles of human rights. No piece should lead musicians or audience members to take part in activities that contravene being decent to one another.

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[1] http://www.iamas.ac.jp/~mmiwa/rsm.html

1 Note stealing *(dedicated to Thor Magnusson)*

A stack of cards are prepared in advance, though you may leave some blank cards ready for later rule changing. Each card has one 'note' symbol, by arrangement as appropriate for the ensemble: they might be pitch classes, note names with an octave, scored notes (including microtonally notated), frequency indications, or joker cards where any pitch will do. One lo-fi option would be to use a deck of playing cards, where 2 to king are the chromatic pitch classes and the ace is a joker.

The cards are dealt to the performers. Each performer divides their cards into two: one set is active, and one is stacked as a pick up pile for later. They will also soon have a discard area for used cards. The active cards are spread, at some spatial distribution, in front of each musician (e.g. on a music stand, or on the floor in front). The spatial distribution may be evocative of rhythmic spacings, or of spatial projection direction, if it is so desired.

The piece now proceeds as follows. At each turn, a performer can do one of the following:

1) Play a sequence from the notes in their possession currently active, respecting order on the stand. Polyphony is permissible, combining local cards, especially if a 2-D position of cards is used (bluetack or a computer may assist)
2) Move an active note to the discard pile. A used card must be placed in a 'used' pile and is out of play.
3) Add a waiting card in the pick up pile to the active area (this action can be combined with step 2, to effect an immediate swap. There is a choice of where to place the card, though a stricter serialist first in first out order could be imposed)

Left to right placement of the piles (pick up new cards from the left, in play cards in the centre, and out of play used cards to the right or even thrown to the floor) would be sensible.

Meanwhile, the live coder has the following options:

1) Take an active card from musician X and place it on the stand of musician Y (this rule includes the capacity to swap two active cards between two musicians, but does not require it).
2) Swap the pick up piles of musicians X and Y
3) Re-order the active cards on the stand, including their relative placement (if indicative of rhythmic or spatial progress)

The piece is at an end when there are no longer any active cards and all pick up piles are empty.

Variation I: The live coder can change the list of rules that musicians have available.

Variation II: A second order live coder can change the list of rules that a first order live coder has available., ad infinitum. For both these variations, it is likely

that a referee will be required to govern the ending of the piece in the event of loss of termination conditions amongst the ruleset (they could collect up all rule sets and active or unused cards, at a point of their choosing, or gradually).

Variation III: The musicians are all using MIDI keyboards, routed through a central computer which limits the overall number of notes available at any one time. The rules governing the number of available notes could themselves be subject to modification.

2 Translation *(dedicated to Juan Romero)*

This work depicts the hubbub after the fall of the tower of Babel. Fortunately, Google Translate, Babelfish and related services are on hand to help; and you may also know a few languages to help matters along. When instructed to translate, you may use your own language skills, or you may use online services; the latter would be quicker for a faster flowing piece avoiding re-writing time.

Start with a common block of text, the same starting point for all performers. It could even be this text, right here, including the rules. You may wish to assign a set of permissible languages to each performer. At each step, each performer can:

1) Set the text, e.g. recite, chant, sing, or translate from text to absolute music via some mapping (such as ascii codes for letters)
2) Transform the text via translation to another language in your language set
3) Remove one sentence of the current text

The live coder can:

1) Change the contents of the set of permitted languages for a given performer
2) Restore an earlier version of the text in any language
3) Substitute a new text, including the deletion of any portion of existing text

The piece ends when there is no text left for any performer to work with.

Variation I and II from 'Note Stealing' are extension options.

Variation III: allow use of computer speech or language audio examples to handle the text by digital proxy.

3 Myth Busting *(dedicated to Julian Rohrhuber)*

This work directly extends to classical antiquity. You may need to keep a reference guide to Greek or Roman (pre Christian) mythology to hand for classical allusions. The seed of the work is however in the public debate of philosophers.

The musicians will use their musical oratorical skills to set up improvisational dialogues with each other. The rule options are:

1) Stay silent and listen
2) Make contact with a musician who is not already engaged in debate. Exchange musical statements; once each, or twice each is sufficient, alternating statements. You should aim to state a clear position, and if responding to a previous point, refute any opposing argument.

The live coder can:

1) Stay silent and not intervene
2) Comment on the action to the audience, mythologizing the spectacle
3) Intervene in the manner of a God from Olympos. This may involve lightning strikes, seduction, transmogrification, or any other bending of the rules of reality. If reality is hard to bend, you may lead any chosen musician off stage, blindfold any chosen musician, dress them in googly spectacles, take away their instrument, or otherwise hinder their ability to take part in reasonable debate.

The piece is over when rational debate has run its course.

Variations I and II from 'Note Stealing' are available.

Variation III : One musician is placed behind a curtain, as Pythagoras, to lecture acousmatically. They may be ignored, or paid attention, as preferred. It may be decided to spatialize their utterances with great pathos.

4 Famous Musicians *(dedicated to Pamela Burnard)*

In this piece, each musician will take on personas of famous musicians, one at a time. You will need a set of masks, feathers or other markers. Some paper printouts of the faces of famous composers and/or performers would do, perhaps with the names written on too to avoid any ambiguity, though you may aim for greater theatricality and go whole hog on the costumes.

If you currently have the symbol of musician X, you perform as a caricature of X. Associated snippets of those composers' works may be made available for this purpose, such as scores or audio files. An improvising ensemble may wish, however, to work without prior material, but should make a strong attempt to portray their targets effectively.

The live coder is in charge of redistributing masks/markers. If a performer is without a personality for a time, they should remain silent, since the

great composers and musicians certainly preclude individual creativity in the present day (at least in the context of this very respectful mausoleum; see also, Pamela Burnard's *Musical creativities in practice* for counter examples). There may be a store of additional masks that can be brought out in the course of the performance, including duplicates. The live coder can gradually remove all masks until all musicians are silent to close the work, or a natural moment of joint termination may arise. If there are indicative works, the live coder may rewrite the works as they see fit.

Variation: The live coder of the first order wears a famous musician mask themselves, and when correcting representative works, aims to correct them towards their own musical style. There may also be a live coder of the second order who can change the first order live coder's mask. Etc.

5 Substitution *(dedicated to Alex McLean)*

This is a homage to the Portsmouth Sinfonia. This piece all about subsitutions of personnel, as the concert musicians can end up in the audience, and the audience at the stands. It requires understanding of the rules by the audience, which could be projected, for instance, especially if they will be changing as you go. Valuable instruments should not be used for this performance, just in case.

At a given action step, each musician must:

1) Play music using their current assigned instrument. You should always try to perform together with others on stage, to the best of your ability. Knowledge of that instrument is not a prerequisite for performing with it.

Optionally, there may be an ensemble conductor on hand to help cajole the musicians. There may be a common score (which can itself be the subject of intervention).

The live coder can:

1) Substitute any instrument for another between two musicians, or from a waiting supply of other instruments
2) Substitute any musician for a member of the audience
3) Remove a chosen musician from the stage
4) Change the score at a given stand, or redirect or even substitute the conductor

The work is over when no musicians are left on stage to perform.

Variations I and II from 'Note Stealing' are available.

Variation III: Explicit tag team procedures may be used, where there are two spare stores of musicians not currently playing, and two associated active musician teams. Live coder substitutions may be to the pools of spare musicians, or to the active. Decisions on tag team substitution are at the call of the spare

musicians, who seek permission to enter the ring, if another in their team is willing to give up their place.

6 Endgame *(dedicated to Fredrik Olofsson)*

This is about death, that weighty topic of lifelike art. Each performer will gradually leave the performance, a bit like Haydn's farewell symphony, but more terminally.

The computational structure is a tree with action, restart and termination nodes, followed by the musicians. If you reach a termination node, you are dead (play dead; actual death is not recommended). You may wish to play as fast as possible, so you get as much done as you can before death.

The node tree is a shared structure, and could be data projected, or overhead projected, or shared on the floor amongst the musicians (optionally there may be more than one tree, but it is recommended that a shared tree is used in initial trials of the work).

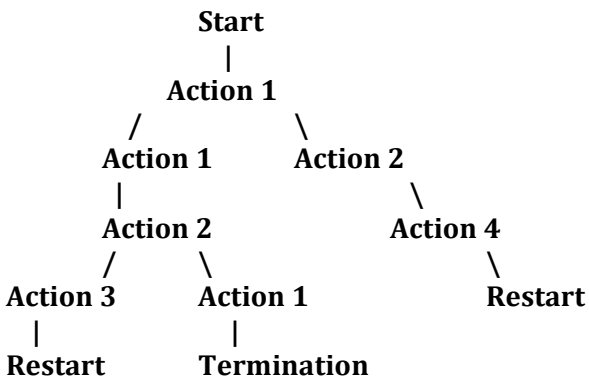
Musicians follow the tree. If they are at an action node, they perform the specified action. If they are at restart, they head back to the top of the tree. If they are at a termination node, they die. If they have completed a given action, they move down the tree; they may freely choose a branch if there are multiple options. The tree begins like this:

Start
|
Action 1
|
Restart

The live coder can:

1) Add a branch to the tree by adding a new action and a restart node after any node before the end of a branch
2) Add an action to an existing branch at any stage before the final node
3) Modify an action
4) Change any restart node to a termination node

An in performance tree might look like this:



Eventually all restart nodes will have been changed to termination nodes, and the piece is finished when the musicians are all dead.

Note that action modification may in complex enactments of the work allow musicians the ability to themselves modify the tree.

Variation I: A live coder of the second order can modify the live coders' rule set

Variation II: Musicians have a certain number of lives, so can die multiple times. This variation is most effective if their current life count is displayed to an audience, and other video game tropes enter into performance activity.

Variation III (danger music): Rather than acting, actual death takes place. Note that this variation is not recommended for conservatoire examinations or other musical ceremonies where the performers expect to be around to get certificates, attend the wine reception, etc. **See also the note about morality on the cover page.**