

austraLYSIS @ The Playhouse, Kingswood April 12, 2018

Program Notes

Performers:

Roger Dean (Director; piano, computer), Sandy Evans (saxophones), Hazel Smith (text performer), Greg White (computer).

Program:

Smith/Dean: The Character Thinks Ahead (c.8.5': Video, Sound, Text)

Dean: The Lefnamd Distribution (c. 7.5')

Smith/Dean After John: Remembering American Poet John Ashbery: comprising Ashbery Poem; Dean Average Violin (acousmatic music); Smith Poem. (c. 5'. Premiere.)

austraLYSIS Babbles (c. 7': Performers Greg, Roger, Sandy)

Louis Couperin/austraLYSIS Remembering Louis (c. 10') and Dean: Ostinato

Charles Martin/austraLYSIS In the Snow Nest (c. 7': Premiere. With realtime video).

Notes on the pieces:

Smith/Dean: The Character Thinks Ahead (c.8.5': Video, Sound, Text)

The character thinks ahead, by Hazel Smith (text) and Roger Dean (composition, programming). (Performed and displayed text, neural net deep learning text generation, sound (2016-8)).

Characters associate in many ways, forming words, groups, sentences, teams, equations, distributional patterns and societies. Words on the other hand tend to treat their characters as fixed and subordinate. The spoken text of *The character thinks ahead* plays on the word character and the different ways in which it is used: for example as a unit or symbol in computing or language; as a person in a play, novel or film; or as a way of describing an individual's distinctive ethical, mental and emotional qualities in relation to their behaviour. The text also refers to the process of text generation as it cogitates on what it means to think ahead, particularly when the thinking ahead is computational.

This piece also displays computationally generated extensions of the spoken text and other text. In the left hand display panel, the generation is based on learning character associations, in the right, word associations. The reader may find resonances of Nietzsche as well as Smith.

The displayed texts are generated by 'deep learning' neural nets, on the basis of prior exposure to texts. Deep learning nets consist of several layers of nodes, with multiple nodes in each: a node is a computational unit that processes incoming information (previous text) so as to learn associations, and make predictions. Commonly, when the input is text, the intended prediction is either the next character, or the next word. The net learns by comparing its prediction with what actually occurs. The net is only 'deep' in the sense that there are multiple layers, but with enough layers and enough information input, as in Google's Go player or Wavenet, sufficient semblance of learning can be reached that

performance is impressive. Our nets are much smaller, and need to be trained on a relatively small amount of input information, such that they relate to it detectably.

Hazel performs her own text, and its sound is transmuted algorithmically in real-time, in the company of saxophone and piano sounds. Hazel's new poetry volume, *Word Migrants*, is displayed outside.

Dean/White: The Lefnamd Distribution (c. 7.5')

The Lefnamd Distribution, by Roger Dean and Greg White. (algorithmic piano, electroacoustic sound, acoustic piano. 2016) 7'30".

This piece is inspired by two piano pieces of Morton Feldman published in 1952, and recently excellently recorded by Steven Osborne (on Hyperion CDA68108). Piano Piece 1952 alternates single pitches, high and low, right and left hands, with essentially no repetition or system, and no dynamic or temporal variation. Intermission 5 on the other hand has recurrent brief dynamic contrasts, and ranges from single notes to 15-note chords, while remaining essentially ppp throughout. *The Lefnamd Distribution* uses the first 50 notes from each piece as the basis for an algorithmic statistical elaboration and realisation on a physical synthesis piano. The elaboration uses a greater variety of each parameter than the originals, while nevertheless initially remaining close to the amalgamated features of the two. In the second section of *Lefnamd*, this algorithmic process continues, but is accompanied by electroacoustic transformation of the piano sound. In the final section, live piano playing complements and contrasts with the ongoing material.

We would like to thank Alistair Noble, author of a key book on Feldman (published by Routledge in the Ashgate imprint), for information concerning the interpretation of the score of Piano Piece 1952. He also acknowledges the influence of talking with Feldman and Nancarrow when performing at a new music festival in Buffalo, NY.

Smith/Dean After John: Remembering American Poet John Ashbery: comprising Ashbery Poem; Dean Average Violin (acousmatic music); Smith Poem. (c. 5'. Premiere.)

This comprises a reading of Ashbery's poem, *Street Musicians*; followed by *Average Violin* (ninety seconds for John Ashbery) by Roger Dean (2017); and concludes with Hazel Smith's poem in memoriam Ashbery.

Roger writes: *Average Violin* is a short in memoriam electroacoustic work that takes its title from a phrase in Ashbery's poem *Street Musicians*, one of many reflecting his interest in music. The piece uses synthetic (computer) voice, with some of the prosodic 'flatness' of Ashbery's readings, together with digitally transformed voice sounds. There are also violin, percussion and piano sounds by Hazel Smith and australYSIS, and these too have been computationally transformed during the compositional process. The computer enunciated text is :

average violin expanding lakes mountains fall and answer.

The second and third of these phrases are mine, though whether Ashbery ever used them in his output has not been established.

I recommend playing this piece at a quite high acoustic level, given good headphones or loudspeakers. Not at the low levels characteristic of the music of his contemporary Morton Feldman.

austraLYSIS Babbles (c. 7': Performers Greg, Roger, Sandy)

Babbles with Xronomorph (software conception and implementation by Andrew Milne, Steffen Herff, Roger Dean and others).

Xronomorph is a novel rhythm generating software application based on ideas of rhythmic evenness and balance operating at multiple hierarchical levels. A given level is subdivided to form the next, so that notes generally get shorter the higher the level reached. Most hierarchical rhythmic structures, such as those of Western music, involve duration subdivision by two, three or multiples thereof forming conventional 'metres' with a single shared base pulse for every level, where every duration is a multiple of that single pulse. In Xronomorph there can be a continuous range of subdividing values, and several different base pulse rates at each level. The resultant patterns are still metrical, but in a more complex way than most. Most importantly, the software is designed to permit continuous changes in the divisor values, and in pattern duration. *Babbles* exploits this potential for continuous changes to provide a rhythmic challenge and complement to the performers.

Louis Couperin/austraLYSIS Remembering Louis (c. 10') and **Dean: Ostinato**

This piece, released on austraLYSIS 2015 album *History Goes Everywhere* (Tall Poppies), involves a literal rendering on the piano of one of Couperin's unmeasured preludes, a 17th century prototype for drastic improvisational transformation, integrated with solo and ensemble improvisation on its materials. These will be followed by a rhythmic ostinato, with related melodic structure, which again allows considerable deviation from the original structure.

Charles Martin/austraLYSIS In the Snow Nest (c. 7': Premiere)

Charles Martin is an Australian composer/researcher, currently working in the RITMO research project in Oslo. He completed his PhD at ANU, and amongst his musical output created several freely available apps for use in group improvisations. We incorporate his 'Snow' and 'Birds Nest' works in this performance, together with austraLYSIS contributions.

About australYSIS:

australYSIS incorporates LYSIS, the former European contemporary music group, commenced 1970 in the UK. Both were founded by Roger Dean (double bass, keyboard, composer, computer interaction) and Hazel Smith (violin, text-creator). LYSIS was co-founded with John Wallace (trumpets, composer), Ashley Brown (percussion), and Colin Lawson (clarinets). australYSIS has premiered, commissioned and/or created more than 150 musical compositions and new media works. It has appeared in most parts of the world, including Europe, Asia, North America, and Australasia, and including more than 30 countries. In 2015, for example, it presents its new work in Australia, Norway and the US. It has made more than fifty commercial sound recordings, intermedia CD-Roms, works for radio and web, and its broadcasts have been heard all over the world.

australYSIS is committed to both composed and improvised new music, sound art, and text and image intermedia work. It presented a concert devoted to Stockhausen on the South Bank in London in 1980, in association with the Philharmonia Orchestra and the composer himself and it has given many performances of his works elsewhere—it has similarly focused on the work of Xenakis, Cage and Reich in presentations in Australia and elsewhere. We have also placed particular emphasis on work from Australia and the UK and collaborated with some of the most imaginative performers involved with contemporary music, sound and new media, in Australia. Originally primarily a performance group, australYSIS is now primarily a creative group, producing electroacoustic and computer-interactive music and polymedia. Composers, improvisers, writers, video artists who are members include: Keith Armstrong (installation and video artist); Daniel Blinkhorn (composer and audio-visual artist); Sandy Evans (saxophones); Phil Slater (trumpet); Hazel Smith (writer and performer); Greg White (computer interaction; sound design). Two members currently work in the US: David Worrall (composer and visual artist, currently working in Chicago); and from the USA, Will Luers (video artist and writer, Portland, Oregon), and one in the UK: Torbjörn Hultmark (trumpet, soprano trombone, electronics).

australYSIS frequently relates its sound works and performances to other artistic media. For example in the case of the visual arts, it has performed compositions by the artist Tom Phillips (UK); collaborated with Alan Davie (UK); created music related to the painters Fred Williams and Michael Johnson (Australia) and Frans Widerberg (Norway); and collaborated with Australian 3D artists such as Sieglinde Karl and Darani Lewers. Similarly it has been involved in developing music/movement works such as *TimeDancesPeace* with the theatre and dance group Kinetic Energy. australYSIS has also created a number of text and sound pieces which were commissioned by the ABC including *Bird Migrants* (2014), *The Afterlives of Betsy Scott* (2007), *The Erotics of Gossip* (2001), *Returning the Angles, Nuraghic Echoes* (1996), and *Poet without Language* (1991) — all by Hazel Smith and Roger Dean — *Poet Without Language* was the ABC's nomination for the Italia Prize in 1992. Since 2011 it has collaborated with renowned installation artist Keith Armstrong, and with American video-artist Will Luers. australYSIS also collaborates with other ensembles, notably in 2010 (and again in 2012) with the enterprising vocal ensemble Halcyon, a fellow-member of the New Music Network. The combination of vocal and electroacoustic expertise has allowed some rare and some premiere performances.

australYSIS' breadth of style is illustrated on its many recordings and on those of its member musicians. Amongst australYSIS' CD releases are *History Goes Everywhere* (2015 Tall Poppies) Dean's double album *MultiPiano* (2013) (piano and computer-interaction): and *Sonic Stones* (2006) both on Australia's leading label for new music, Tall Poppies. The

double CD *Resounding in the Mirrors* was released on the UK label Future Music Records (2001); the australYSIS Electroband's *Present Tense* is also on Tall Poppies; another unusual double CD comprising two 60 minute improvisations, *The Next Room*, is available on Tall Poppies (TP 050) joining the earlier *Moving the Landscapes* (TP 007). In addition, *Windows in Time* (TP 039) represents a range of australYSIS's work, with music from Xenakis to Cresswell, as well as by members of the group. australYSIS has also contributed to Hazel Smith's sound and performance-text CDs, *Poet Without Language* (Rufus RF 005) and *Nuraghic Echoes* (Rufus). Amongst other releases are *Walking the Faultlines*, chosen for inclusion on the International Computer Music Association Cyberquilt CD-Rom, their first; *Wordstuffs : The City and The Body* commissioned by the Australian Film Commission for their Stuff-Art site; and *Returning the Angles* (CD-R of sound and 3D-interactive image, SOMA 787). One of australYSIS's recordings was listed as a Record of the Year, by Records and Recordings, UK, and several have been nominated for ARIA awards. Substantial works of audio and intermedia feature on the CD-Rom published as part of Hazel Smith's *The Erotics of Geography: poetry, performance texts, new media works* (TinFish Press, Hawaii, USA, 2008). Her most recent book is *Word Migrants* (2016; published by Giramondo). Forthcoming on Bandcamp (for digital download) is an australYSIS album with Torbjörn Hultmark, featuring soprano trombone, piano and electronics.

australYSIS undertakes commissions and engagements for arts centres, festivals, broadcasting, recording and for international touring. It has completed eleven overseas tours since 1990, and in 1992-3 performed all over Australia. In one such tour it was featured in three events at the leading new music festival in UK, Huddersfield, and on BBC Radio 3. It has previously been supported by the Australia Council as a 'Key Organisation' for its creative and performance work, and its work is presented by the ABC and other international broadcasters, as well as in multimedia formats. australYSIS is also concerned with educational work and other means of fostering appreciation. Examples of such work include Roger Dean's presentation of an ABC radio documentary on improvisation, and in 2010 two programmes for the BBC in London on Australian Jazz; his books *Creative Improvisation* (Open University Press, UK), *Sounds from the Corner* (about Australian contemporary jazz, Australian Music Centre), *The Oxford Handbook of Computer Music* (OUP, 2009) and the *Oxford Handbook of Algorithmic Music* (published 2018); Hazel Smith's book *The Writing Experiment* (Allen and Unwin, Australia); and their jointly edited book *Practice-led Research, Research-led Practice in the Creative Arts* (Edinburgh University Press, 2009).