

Extrait du Rhuthmos

<http://www.rhuthmos.eu/spip.php?article831>

John Adams - China Gates (1977)

- Recherches

- Le rythme dans les sciences et les arts contemporains
- Musique et Musicologie - GALERIE - Nouvel article
- Galerie sonore - Nouvel article

Loriot
Bien modéré (♩=100)

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mf
sans sourd.

ff (coulé, doré)

Rhuthmos

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John Adams - China Gates (1977)

The "gates" of the title refers to the change of mode - not the actual modes for each section *per se*, but rather, the exact moment of transition from one mode to the next. The image shown is the graph-form representation John Adams provided as a rough visual guide to the gating sequence. The gating sequence clearly shows extended use of modes at the beginning and towards the end of the piece.

The piece is gated poly-palindromically (offset) ; the bar structure within each mode is a reverse form of the same structure later in the piece. There are 3 main palindromic sections - the main one being the first 8 modes and the final 8 modes. The bar structure for the first eight is 15, 15, 12, 12, 8, 8, 4, 4, with the bar structure for the final 8 being 4, 4, 8, 8, 12, 12, 15, 15 (*i.e.* a mirror image of the first 8 modes). Other palindromes occur between modes 9-12 and modes 17-20, and the final pure palindrome being modes 13-14 and modes 24-25. However, there are some cross-modal palindromes throughout. The piece is made up of 33 modes in total - this meaning there is a defined central mode. The pre-central mode is, interestingly, the only mode to contain 3 bars. On paper this gate stands out prominently. How does this relate to music ? Well, to the ear, the piece works into the middle, then unwinds itself again, almost like the unwinding of a double-helix.

The piece is a benchmark work in the demonstration of the influence mathematical theories of the time were having across society - the most noticeable mathematical formula that was becoming widely-known to the general public being, of course, fractals : specifically, the research undertaken in the 1960's by Mandelbrot (minimalism is in part the natural artistic interpretation of these new mathematical structures - the discoveries of repetitive patterns in nature, across all boundaries).

This piece, in its self-contained symmetry, is almost a musical fractal.