

Chris Bowman (au)University of Technology, Sydney
Senior Lecturer and Director of Animation / Co-
Director of the Locative Design Lab
chris.bowman@uts.edu.au

Explorations of Visual Representation: Towards a Language of Movement

Introduction

Since the invention of cinematography experimental cinema has undergone continual advances in both technology, aesthetics, and content. With the development of digital interactive technologies, these conventions are being challenged and reshaped. This paper examines the graphic representation of abstract interactive cinematic elements that seek to explore movement, time and space and build upon the graphic tools film-makers used in the early 20th century to express these elements and affect the cinematic language of movement into the 21st century.

Early pioneers of experimental film, such as Eggeling, Richter, Ruttmann explored a metaphorical and symbolic visual language of abstraction that defined spatial dynamics and temporal layering of movement, time and space (Le Grice 1979). These early explorations into the language of movement were conceptualised through unique systems of graphic representation that combined signs and symbols. They explored abstraction in the moving image through an "equivalence of opposites" (Richter 1952) analogous with musical and dance notation resulting in a fluid abstraction of geometric, organic and anthropomorphic forms. Later we see expansion of these considerations by Eisenstein in his seminal work on montage.

These and other early filmmakers worked within the technical constraints of 2D and 3D representation available at that time. Today, digital technology provides film-makers greater flexibility to determine the cinematic modalities of the aesthetic, narrative structures and forms of interactive engagement. This is evidenced through the rich spectrum of experimental interactive cinematic artworks that has emerged in the late 20th century. Digital technology has also provided new ways of making schematic representations of move-

ment, time and space used in the visualisation of interactive cinema content that move beyond the platonic notion of form and statics (Hatzellis 2005) such as flow charts and other forms of graphic mapping.

The author proposes that in the context of the newly emerging paradigms for experimental interactive cinema (Manovich 2006) there is an increasing need for artists to extend their understanding of these complex modalities and move towards the development of a new language of movement as exemplified by the early pioneers of experimental film.



Fig. 1: Spring and Asura 2009

New paradigms in graphic representation

Spring and Asura .01 and .02 – Disturbance (2008/2009) is an interactive cinematic artwork in development since 2006 (Fig. 1). It was recently exhibited as a single channel dual screen projection installation. The work explores the relationship between video images of the natural world and Miyazawa's poem 'Spring and Asura'. The work is further explored through the movement of visitors within the space and the recitation the Heart Sutra. Using a combination of image and motion capture technology the artwork explores the movement of light and shade within the video recordings and movement of the visitor in the space. This self-generating interconnected system creates an ordering and re-ordering of the image/text resulting in shifts in time, movement and abstraction through the viewing of the work.

The development of this artwork was partly informed by Eggeling, Ruttmann and Eisenstein. The author found their explorations into a visual language of movement analogous with the nature of abstraction and representation in S&A. The author further drew from seminal thinkers such as Bergson, Deleuze and Serres for their concepts of space, time, move-

ment, and Maturana and Luhmann for the interconnecting self-ordering and organic systems associated with autopoiesis. (Chagas 2005) Together, these theorists provided the author greater understanding of the fluid and evolving, simultaneity and co-dependency of interactive narrative structures and modes of engagement that may be extended through one or more 'planes of immanence' (Deleuze 1986).

From 2005 to the present the author invested these ideas into schematic visualisations for S&A. These schematic models propose to reframe the vertical and horizontal axis (Deleuze's classification of the Movement Image) and adapt them as a way of structuring three modalities of abstract cinematic content and interactive engagement. These will be graphically arranged as open/closed 'contractive' and 'expansive' structures through the synthesis of software, technology, and the environment in which the artwork exists.

A key feature of this schematic model is its organic nature. It is flexible enough to account for the formal complexity and simultaneity of the narrative, aesthetics, software and interactive engagement. The author's next iteration of the model will be made more operable using 3D animation and modelling software to enable greater flexibility in order to define spatial dynamics and temporal layering of movement, time and space for a given artwork. In so doing, achieve a rapid prototyping tool that allows the author to control and explore the planes of immanence and narrative structures through iterative image processing. Through this new animated schematic the modalities of space, time and movement explored through the early pioneers will continue to advance our understanding and the development of experimental interactive cinema today and a new language of movement will emerge.

References

- Chagas, P. (2005) Polyphony and embodiment: a critical approach to the theory of autopoiesis Transcultural Music Review #9. Retrieved from <http://www.sibetrans.com/trans/trans9/chagas.htm> [accessed 27 05 2010]
- Deleuze, G. (1986) Translation Tomlinson H. and Habberjam B., Cinema 1: The Movement-Image, Athlone Press, p59
- Eisenstein, S. (1989) The Film Sense, London, Faber and Faber, p70
- Hatzellis, S. (2005) Edge of Chaos. In Ian Gwilt, editor, Made Known – Digital Technologies and Ontology of Making, Sydney, University of Technology Sydney, pp 36-57
- Manovich, L. (2006) After Effects, or Velvet Revolution Artifact, Volume 1, Issue 2 2007, pp 67-75, Retrieved from: <http://www.informaworld.com/smpp/content-content=a783202198> [accessed 3 April 2010]
- Le Grice, M. (1979) Film as Film, The Arts Council of Great Britain, pp31-35
- Richter, H. (1952) Easel – Scroll – Film Magazine of Art, p78-86 Retrieved from <http://www.rhythmiclight.com/articles/EaselScrollFilm.pdf> [accessed 27 05 2010]
- Totaro, D. (1999) Part 1: Cinema 1: The Movement-Image - Gilles Deleuze's Bergsonian Film Project Off Screen, Retrieved from: http://www.horschamp.qc.ca/9903/offscreen_essays/deleuze1.html [accessed 12 04 2010]
- Wartenberg, T. (2003) Style and Methodologies: On Carroll's _Engaging the Moving Image, New Haven and London, Yale University Press. International Salon-Journal (ISSN 1466-4615), Retrieved from: <http://www.film-philosophy.com/vol9-2005/n48wartenberg> [accessed 01 06 2010]