

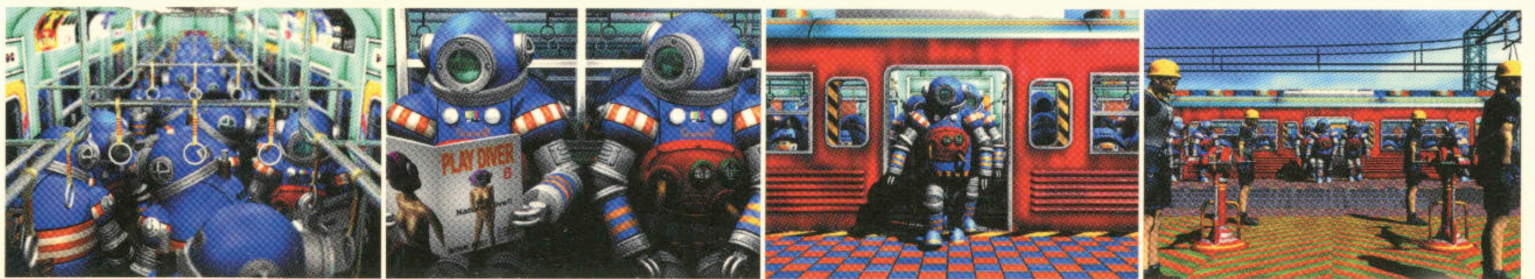
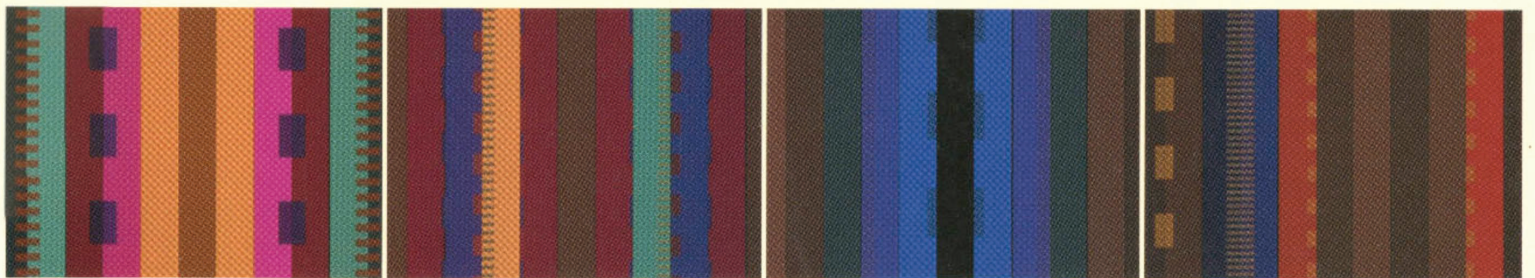


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ANIMATION UNLIMITED

Innovative Short Films Since 1940

Liz Faber and Helen Walters



TITLE
Calculated Movements

DIRECTOR
Larry Cuba

COUNTRY OF ORIGIN
USA

TECHNIQUE
Computer animation

FORMAT
16mm, black & white

LENGTH
6 minutes

YEAR
1985

LARRY CUBA

Born in Atlanta, US, in 1950, Larry Cuba is a pioneering computer animator who actively made films from the early 1970s to the mid-1980s. Cuba has been described as being part of the second generation of computer animators, following in the footsteps of 1960s gurus, such as John Whitney Snr. and Stan VanDerBeek.

Cuba attended Washington University, US, between 1968 and 1972, majoring in architecture. This early love of form, function and structure is clearly present in all of his works, and he has a lifelong interest and passion for what he has described as the 'connection between mathematics and art'.

He gave up architecture in 1972 and went instead to the California Institute of the Arts (CalArts). He attributed this dramatic change in career direction to the irresistible potential offered by computer animation. He has commented: 'I was originally attracted to architecture because of my interest in geometry and three-dimensional form. When I discovered that mathematics could be used to generate animating geometric form via computer graphics I realized that I had to do that. The direct connection between algebra, music and abstract form appeared as a vast new territory for exploration.'

Like many experimental animators before him, Cuba was self-taught – while he was at CalArts he was keen to explore the potential of computer-driven graphics, although the subject was not yet being offered to students. He found access to the NASA Jet Propulsion Lab and taught himself programming. By 1974 he had made his first film, *First Fig*, on a Univac 1108 mainframe.

In 1975, John Whitney Snr., one of his heroes, invited Cuba to work on a film with him. The resulting masterpiece was *Arabesque*. Their collaboration involved Cuba implementing his mathematical ideas in computer software, which gave him a first-hand insight into the inner workings of Whitney's theories of digital harmony.

Cuba has since produced more computer-animated films: *3/78 (Objects and Transformations)* (1978), *Two Space* (1979) and *Calculated Movements* (1985). These works have been shown at film festivals throughout the world and have won many awards. Cuba has received grants for his work from the American Film Institute and the National Endowment for the Arts, and he was awarded a residency at the Karlsruhe Centre for Art and Media Technology (ZKM) in Germany. While he was artist-in-residence at ZKM in 1995–96, Cuba began work on a software development project that he says will eventually result in another film or installation.

In the meantime he continues to work as executive director of the iotaCenter in Los Angeles, a non-profit-making organization he founded to promote the art of abstraction in the moving image. Of Cuba's influence on computer animation, Raphael Bassan wrote in a 1981 issue of *La Revue du Cinema*: 'In the sphere of abstract cinema (lacking a better term), Larry Cuba's research is, in fact, at the origin of a new direction which does not yet have a name.'

Calculated Movements (1985) is a sequence of graphic events, made up from simple elements, which are choreographed so that they repeat and combine in an ordered structure. The simplest element is a linear, ribbon-like figure that takes a path across the screen before disappearing. The most complex level is the sequential arrangement of the graphic events into a score that describes the composition from beginning to end.

