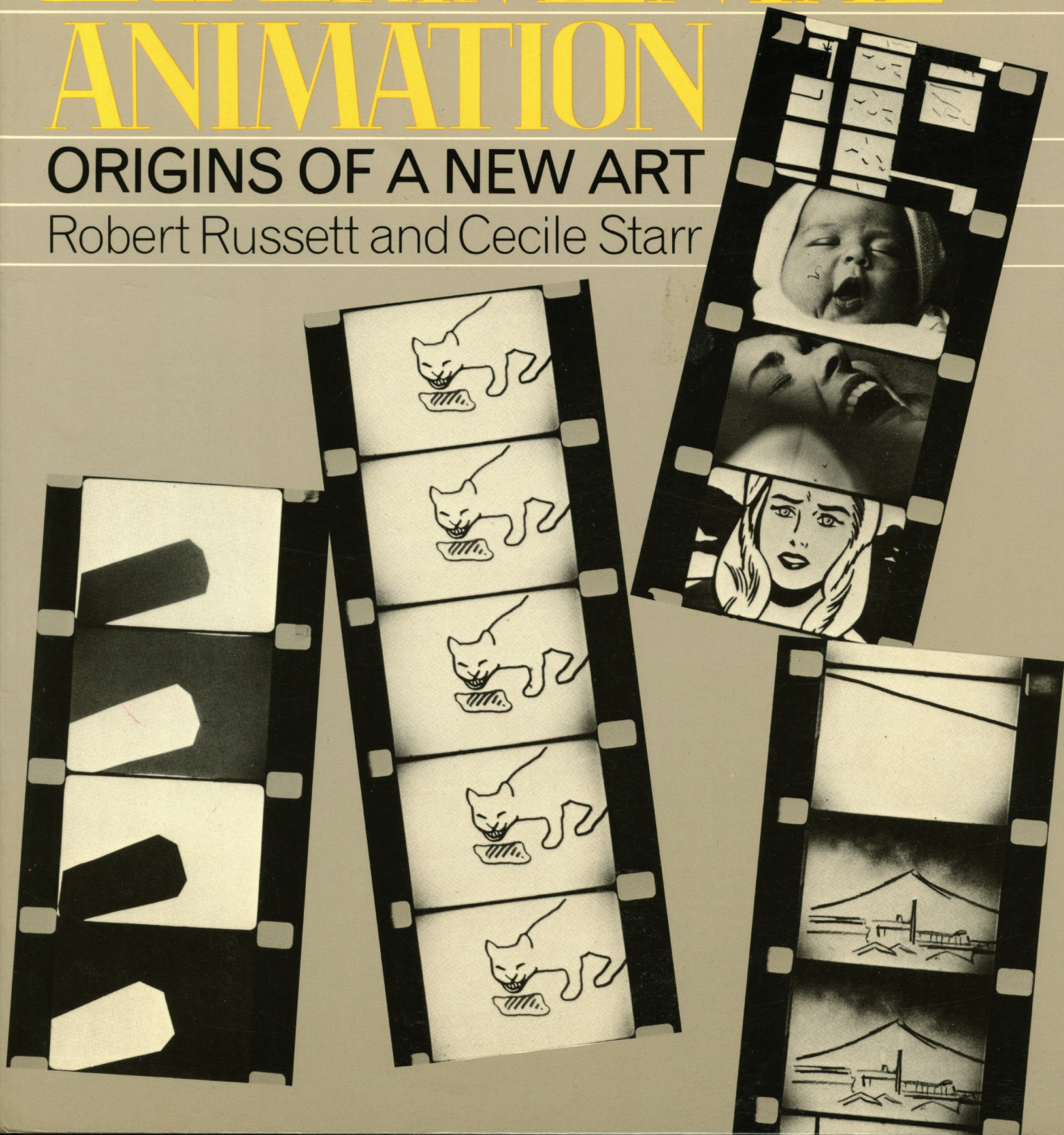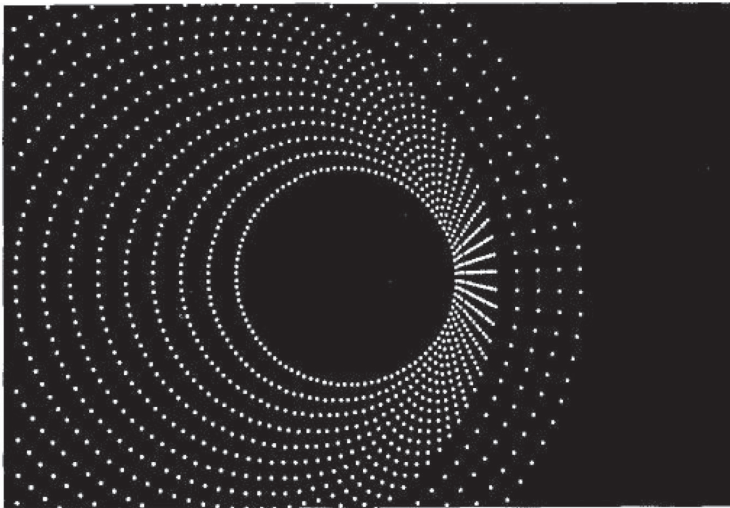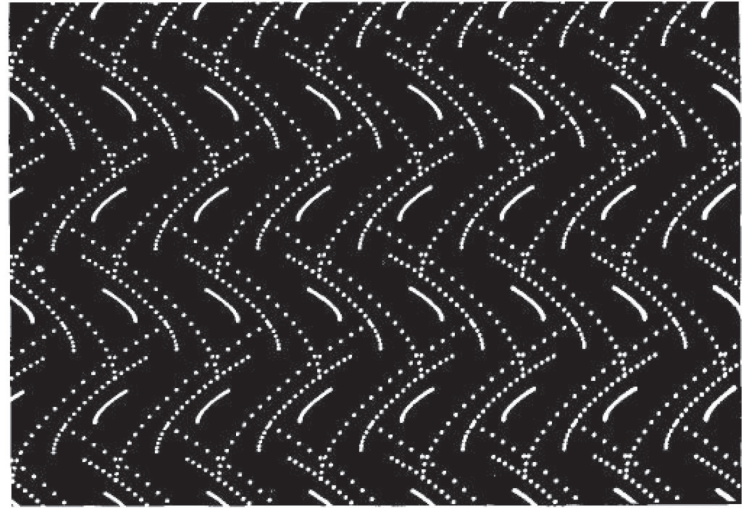# EXPERIMENTAL ANIMATION

ORIGINS OF A NEW ART

Robert Russett and Cecile Starr

From "3/8" (1978) by Larry Cuba, a computer-generated film.

From Two Space (1979), Larry Cuba's second computer animation film.

Newcomer Larry Cuba, unlike his predecessors, has completely bypassed the experience of making hand-generated animated films. A signal artist of the current generation, his entire creative output has been produced with the aid of various kinds of electronic and digital technology. With an impressive professional background that includes programming John Whitney's *Arabesque* (1975) and producing a computer animated sequence for George Lucas's *Star Wars,* Cuba brings to his experimental work a thorough knowledge of technology and a highly developed esthetic sensibility. The imagery of his best-known works, 3/78 (1978) and *Two Space* (1979), is composed of luminous white dots moving gracefully against a black field. In 3/78 sixteen forms, each consisting of one hundred points of light, perform a series of precisely rendered rhythmic transformations, accompanied by a sound track of Japanese flute music.

In *Two Space,* patterns similar to the tile designs found in Islamic temples are generated by performing a set of symmetry operations (translations, rotations, reflections, etc.) upon basic geometric figures. These exotic and complicated patterns, which are set against 18th century Javanese gamelan music, are choreographed to produce a variety of illusionary effects including figure-ground reversal and after-images of color. In his most recent production, *Calculated Movement* (1985), Cuba has created his most complex arrangement of sequential graphic events to date, representing a significant breakthrough in the use of low-end equipment.

In describing his approach to film production and its relationship to the tradition of experimental animation, Cuba says,

"The underlying problems of design in motion are universal to everyone working in this tradition whether they use the computer or not. So in that sense what I do is not 'computer art.' On the other hand, the technology is clearly important. If you think about the process used in abstract animation it does become important that you're using a computer, in the way it affects your vocabulary. Because if you start with these mathematical structures, you can discover imagery that you have not previsualized but have 'found' within the dimensions of the search space." Cuba believes that the numerical capability of the computer is adding a new creative dimension to the field of experimental animation just as mathematical perspective, for example, provided additional visual possibilities for the Renaissance artist.

While the computer-generated productions of artists like Schwartz, Whitney, Emshwiller, and Cuba represent a post-film manifestation of experimental animation, the medium of video with its unique image-processing capabilities offers yet another model for the synthetic production of motion graphics. This art form began in the early 1960s when several performance-oriented artists then working in Europe, principally Wolf Vostell and Nam June Paik, began to appropriate, transform, and redirect the icognography of commercial television. Their first video works consisted of makeshift assemblages of technology and were incorporated into their "happenings" of 1963. Vostell and Paik altered the television picture with magnets, electronic household appliances, and other manipulations, making self-referential works which were part of the then-current modernist rhetoric. ...