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Ulysses in the Subway

Marc Downie, Paul Kaiser, Flo Jacobs, Ken Jacobs

2016, 3D, color & black/white, 59 min., English. **Producer** Paul Kaiser. **Production company** OpenEndedGroup (New York, USA).

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A picturing of sound in 3D.

We hear a recording of Ken's subway ride up to 42nd Street, his wanderings in the Times Square station, his ride downtown on the A train, and his return to street-level on Chambers Street. Finally, his climb to the 5th floor loft where Flo (Penelope) awaits him.

Sound-as-image turns fleeting presences (voices, footsteps, a steel-drum performance) into epic visual events. A still image may linger, allowing our gaze to wander through the complex particularities of a moment of ordinary noise. This richness of imagery reflects the fact that for every 1/24th of a second, there are 2000 audio samples recorded. Each frame, then, is built from these 2000 sources; constructed, that is, in 3D from more than 21 different ways of algorithmically analyzing and visualizing sound. So while the sound is always pictured accurately, the way it's pictured can change dramatically.

Past intrudes on present as Edison's 1905 film of this very path through the NY subway appears, also rendered in 3D. Long-gone passengers on the Grand Central platform connect to sounds of passengers today. Near the end, Betty Boop also puts in an appearance.

Note on the Collaboration

The four of us share a long-time fascination with the fact that humans see with two eyes, not one. In our respective works, we're often drawn to exploring the mysteries of 3D vision.

Humans have two ears as well, and Ken wondered what the space of sound looks like. Ken and Paul had café con leche in a crowded diner downtown, amazed at the complexity of sound to be heard in each and every moment: a tangle of voices, clatters, hisses, sizzles, distorted radio music, car horns, traffic. How to picture that complexity? How to convey its utter beauty?

After all agreeing that that would be a fine basis for a collaboration, Ken had an idea for a practical point of departure. He supplied a rich audio recording of an underground adventure he'd taken several years previously, an hour-long wandering through the subway and then his return home. He'd used the recording previously in live performances of his *Nervous Magic Lantern*, but felt he'd far from exhausted its riches.

Marc flew from Chicago to New York and we convened at Ken and Flo's loft. We all talked about the ways one can imagine sound to look, and Marc took us through how scientific visualizations of sound are made.

Returning to his studio, Marc devised 21 algorithmic ways to picture sound wave-forms, programming them in OpenEndedGroup's field software platform. What emerged were three-dimensional "sculptures" – each constructed solely out of a precise sliver of time. These were arranged in an extremely long virtual row (picture it as a hundred miles long), which our virtual camera could shuttle down at tremendous speed and from various distances away.

Paul did the editing. The way the computer "heard" the sound didn't always match the way we did – sometimes the visualizations didn't bring out what our ears and brains very clearly discerned as we listened. So the editing had to match the mind's movements, which entailed a lengthy process of layering and blending the visualizations and of cutting. A sense of a parallel past was evoked by means of unexpected surfacings of a 1905 Edison film of the subway. Delaying one eye gave us the equivalent of twin-perspectives – transforming the old film into 3D.

Ken and Flo looked at the first edit and exclaimed that the rapid flow of images needed to just stand still from time to time – to give our eyes time to explore freely that wondrous millisecond of sound. This then became a key principle. Marc and Paul then added color to what was originally a black-and-white film – the moving imagery turned golden, while the still frames were most often blue.

To season Ken's homecoming at the end, Ken and Flo introduced Fleischer's early Betty Boop cartoons as material. A few bursts of this imagery, painstakingly placed, sufficed.

The whole time, a constant process of review and discussion. Six complete edits in all before we were satisfied.

And then the creation of a parallel project in virtual reality. But that's a different story.

Marc Downie, Paul Kaiser, Flo and Ken Jacobs

Marc Downie, born in 1977 in Aberdeen, Scotland, is a digital artist, filmmaker, and programmer based in Chicago whose pioneering approach to digital art frequently combines three signature elements: non-photorealistic 3D rendering, the incorporation of body movement by motion-capture and other means, and the autonomy of artworks directed or assisted by artificial intelligence. He has enjoyed a long-standing artistic collaboration with Paul Kaiser as part of OpenEndedGroup. Since receiving his PhD from the MIT Media Lab in 2005, he has expanded his thesis work into the open source software Field, which the group relies upon to this day in creating works of cinema, dance, installation, music, public art, and virtual reality.

Paul Kaiser, born in 1956 in Munich, Germany, is a digital artist, filmmaker, and writer based in New York who frequently practices the art of collaboration. Together with his OpenEndedGroup colleague Marc Downie he has created works that span a wide range of forms and disciplines, including 3D film, dance, installation, music, and public art. Outside collaborators in the performing arts have included Robert Wilson, Merce Cunningham, Bill T. Jones, and Trisha Brown.

Flo Jacobs, born in 1941 in New York, USA, is a New York-based painter. She has been working with Ken Jacobs since leaving art school in the very early 1960s. She is a performer in his films and shadowplays and mother to two artists (see her in *MOMMA'S MAN* by Azazel Jacobs). Still a painter, she has effectively pulled Ken's art away from narrative and into essence, that which exists.

Ken Jacobs was born in 1933 in New York, USA. He studied painting with Hans Hofmann from 1956 to 1957. He started making films in 1955. In 1966, Jacobs founded the Millennium Film Workshop, of which he was the director until 1968. A year later, he started the Department of Cinema at the State University of New York in Binghamton. He taught there from 1974 until his retirement in 2000. Along with teaching cinema, he has made a number of experimental films and videos, which have been shown worldwide. In addition, he has presented a series of film performances under the names *The Nervous System* since the mid 1970s and *The Nervous Magic Lantern* since 2000.

Films (selection)

Marc Downie, Paul Kaiser (Open Ended Group): 1999: *Ghostcatching* (film installation). 2007: *Forest* (video installation). 2009: *Point A → B* (film installation). 2010: *Upending* (60 min.), *Stairwell* (film installation), *After Ghostcatching*. 2011: *Loops* (14 min.). 2012: *Plant* (16 min.). 2013: *All Sides of the Road* (12 min.), *Knight's Rest* (6 min.), *All Day* (film installation, 5 min.). 2014: *12 Stabs at Blade Runner* (21 min.), *Saccades* (36 min.), *Detroit Transect*. 2016: *Ulysses in the Subway*.

Flo Jacobs: 1991: *Keaton's Cops* (23 min.). 2013: *The Guests* (73 min., Forum 2014). 2016: *Ulysses in the Subway*.

Ken Jacobs: 1955: *Orchard Street* (12 min., Forum Expanded 2015). 1959: *Star Spangled to Death*. 1963: *The Whirled* (27 min.). 1960: *Little Stabs at Happiness* (18 min.). 1963: *Blonde Cobra* (30 min.), *Baud'larian Capers* (25 min.). 1964: *Window* (12 min.), *The Winter Footage* (50 min.). 1967: *Air Shaft* (4 min.). 1968: *Soft Rain* (12 min.),

Nissan Ariana Window (15 min.). 1969: *Tom, Tom the Piper's Son* (115 min.), *Globe* (22 min.). 1975: *Urban Peasants* (50 min.). 1978: *The Doctor's Dream* (27 min.). 1985: *Perfect Film* (27 min.), *The Winter Footage* (50 min.). 1990: *Opening the Nineteenth Century: 1896* (11 min.). 1991: *Keaton's Cops* (23 min.). 1995: *The Georgetown Loop* (11 min.), *Disorient Express* (30 min.). 1999: *Flo Rounds a Corner* (6 min.). 2002: *A Tom Tom Chaser* (10 min.), *Circling Zero: Part One, We See Absence* (114 min.). 2003: *Keeping an Eye on Stan* (117 min.), *Capitalism: Slavery* (3 min.). 2004: *Celestial Subway Lines/Salvaging Noise* (108 min.), *Mountaineer Spinning* (26 min.), *Star Spangled to Death* (420 min.). 2006: *New York Ghetto Fishmarket 1903* (132 min.). 2007: *Let There Be Whistleblowers* (18 min., Forum Expanded 2007), *Razzle Dazzle (The Lost World)* (92 min.), *Capitalism: Child Labor* (14 min.), *Anaglyph Tom (Tom with Puffy Cheeks)* (108 min.). 2009: *What Happened on 23rd Street in 1901* (14 min.). 2011: *Seeking the Monkey King* (39 min., Forum Expanded 2012). 2012: *Street Vendor* (6 min.), *Cyclopean 3D Life with a Beautiful Woman* (47 min.), *Blankets for Indians 3D* (57 min.). 2013: *A Primer in Sky Socialism* (58 min., Forum Expanded 2014), *Joys of Waiting for the Broadway Bus* (180 min.), *The Guests* (73 min., Forum 2014). 2014: *Pygmalion Cubed* (100 min.), *Canopy* (4 min.), *Cyclops Observes the Celestial Bodies* (15 min., Forum Expanded 2015). 2016: *Popeye Sees 3D* (21 min., Forum Expanded 2017), *Ulysses in the Subway*.