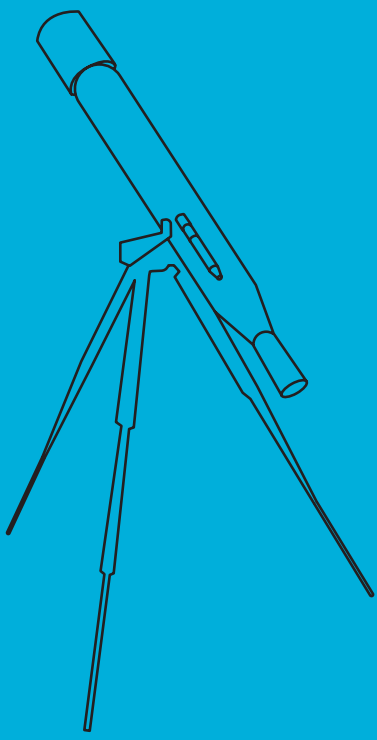


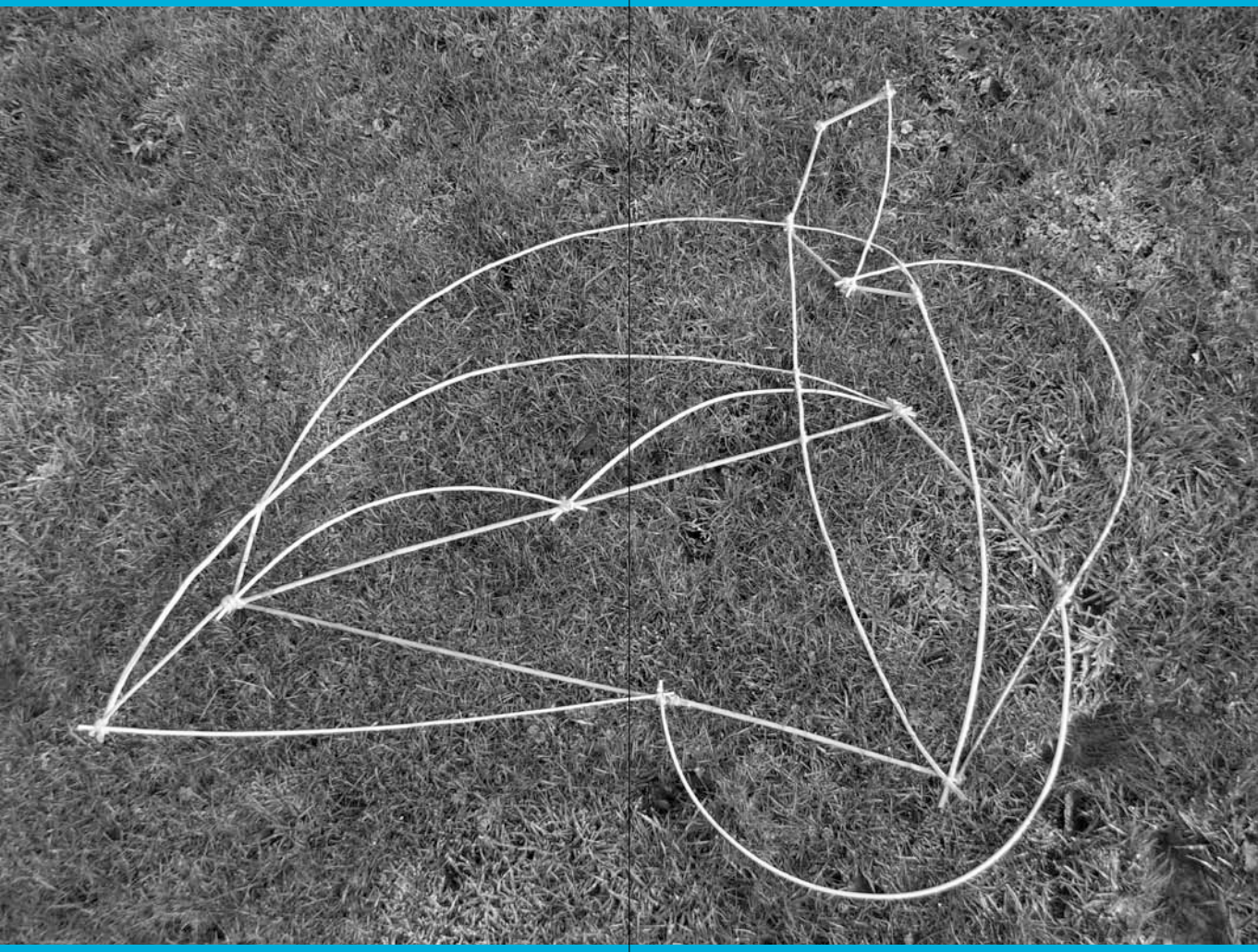
Detleva Verens

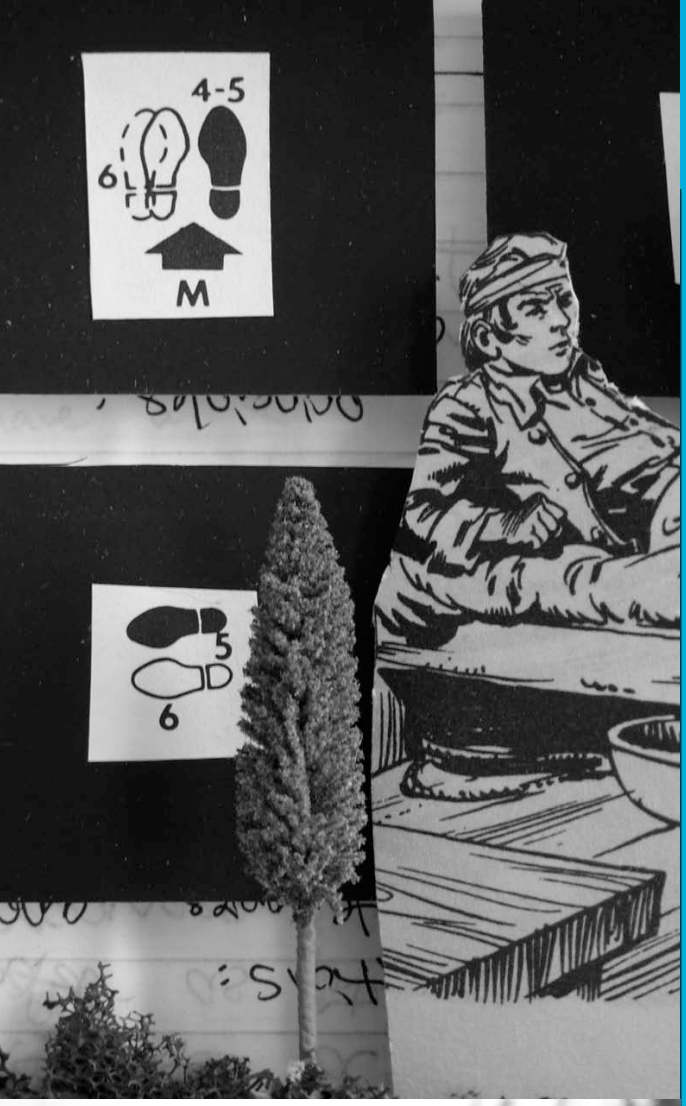
Estonian composer Detleva Verens studied cybernetics, phonetics and speech technology at the Tallinn University of Technology, but after receiving the ALEA Composition Prize in 2002 for her piece *Ad Astra Per Aspera*, Verens shifted her focus from academic work to artistic experimentation, applying to her musical composition the strategies and schemas she had developed through her scientific research. Discussing her personal combination of science and music, she writes: "In studying the work of Max Planck, particularly his law of black-body radiation, what strikes me most is how he worked and re-worked the equations. He knew there was an exquisite equation which could describe the spectral radiance of black-body radiation, he just needed to find it. I am like this. When I compose, I engage first and foremost with pattern recognition. I observe from the workings of the sound, I find the equations, the logic, the function of the sound, so I can notate this as a system, an equation and a score." *Ad Astra Per Aspera*, a work for 30-voice choir, was inspired by Verens's experience of the 1987-1991 Estonian Singing Revolution. The piece is an exploration of flocking patterns, hurricane formation and other emergent behaviours: as the singers move through the performance space, the music coalesces into crystalline strands of collective melody then disperses into diaphanous sighs.

As befits her concern with equations and patterns, Verens's approach to notation is highly experimental. She considers the notational technique of each piece to be an integral part of the compositional process, as important a part of the work as the sounds themselves. *Acquifera* (2005), the first piece which Verens wrote after her move to Ireland in 2004, is notated using a series of photographs she took on walks with her father in the hills south of Tallaght. Verens noted how gorse bushes in the area were matted with strands of sheep hair, and how these in turn were covered with hundreds of individual

water droplets. Scored for eight violinists on roller-skates and performed before (and within) a blind-folded audience, *Acquifera* is informed by scientific processes such as Brownian motion, chaos theory, and the Lévy flight-random walk model. Another of Verens's works from this period using non-traditional notation is *The Cabinet of Dr. O'Mahony* (2006), for string quartet. This piece comprises three cabinet scores, small boxes that contain a mixture of musical notation, dance steps, figures from Robert Louis Stevenson's *Treasure Island*, and miniature shrubbery. Verens traced Stevenson's map onto South Dublin County via matrix transposition equations, and arranged the objects within the cabinets into tableaux according to geometries derived from these equations.

In her most recent work, Verens has become particularly interested in micro-sound—what she calls "the shaving of consonants, the sawdust of words." Her deployment of tiny binaural





microphones inside the trumpet of fellow Grúpat member Turf Boon and inside the mouth of singer Jennifer Walshe has allowed her to explore sound on a microscopic level, dissecting it to examine tiny changes in air pressure while simultaneously magnifying it through amplification. The fruits of these experiments can be seen in pieces such as Verens's *Amphitopotrichospin* (2006), for trumpet, and *Scintillia* (2007), for solo voice. *Amphitopotrichospin* consists of a score, scratched on a fragment of enamelled tile, which requires a magnifying glass to be read. *Scintillia*, on the other hand, consists of three huge scores made of bamboo and wicker. One score is based on satellite photographs of a forest in South Dublin County; the other two scores are based on constellation positions and satellite orbits in the sky over Tallaght on 15 March 2007. In constructing the scores from bamboo and wicker, Verens was influenced by the stick charts of the Micronesian Marshall Islanders. The stick charts of the Marshallese are used as navigational aids for rowing canoes between islands, and notate ocean currents and swells rather than geographical formations. Verens writes "The stick charts fascinate me because they are a completely different way of thinking about mapping, being concerned with patterns and flows or energy and how these flows are affected by objects that exist within them. This mapping methodology seemed perfectly suited to sound." Similarly, Verens has often referred to Hesse's *The Glass Bead Game* and described it as one of her favourite books, noting "Music doesn't merely have a shape but shapes the world." In *Scintillia*, Verens plays a sort of glass bead game with space and sound, highlighting connections between constellations, geography, sound and energy, and promoting a very unique type of musical harmony.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