Tensegrity structures and inflatable membranes can be considered analogous. They can both be described as pressure-based systems in which a coherent envelope is tensioned through compressive force in order to achieve a state of self-equilibrium.

Persistent Model #2 is a full-scale speculative prototype that employs two classes of inflatable component—one ‘hard’, irreversible and pre-inflated (metal); one ‘soft’, reversible and continually pressurized (laminar foil). The principles of tensegrity are evident at two distinct scales.

Persistent Model #2 adopts the topology of Kenneth Snelson’s Pleon Weave tensegrity (which met an untimely end after a gust of New York wind blew it off the parapet of his York Avenue studio during a photographic session in 1960). Particular characteristics of Pleon Weave are reconsidered with an architectural sensibility that searches to establish synergies between structural logic, component demands and material dynamics, as well as addressing issues of skin and local specificity through the fabrication of variety.

Persistent Model #2 builds upon an existing body of research knowledge developed at CITA in free-form metal inflation, the notion of Persistent Modelling and a sustained critical investigation of the roles digital tools can play in extending the ways in which we think, design, realise and experience architecture.

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