

Warren Seelig: Opening Textile

By Philip Beesley

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Warren Seelig's work has developed during the past three decades from loom-woven fabrics into increasingly free and expansive sculptural constructions. There are two large groups of new work at The Museum for Textiles. Many independent figures float in one group, taut membranes held by skeletal structures, catching and holding light. The other group is a series of sculptural fragments supported by a broad plaster shell. On that surface is cast a delicate skein of shadows behind floating metalwork. Through both groups of work runs the structure of weaving, a play of warp and weft in myriad cycles of tensing and compressing.

Two fields

The work in *Machina Textrina* represents a juncture between one group of refined figures and another of fragmentary hybrids. The first group shows a unified vocabulary based on translucent membranes stretching over circular arrays of metal spokes. This work is the result of many years of development, refining and clarifying the elements and approaching an essential purity.

Here radiating spoke-and-axle skeletons are developed with a variety of stiffened frames and counterweight details. Spokes and membrane manipulations render these as independent bodies. The membranes swell in the centre and thin out at the ends, approaching a structurally optimal form in which accumulated stresses born by elements near the centre match the width of the supporting web, in contrast with lesser stresses born by the thinner webs towards the outer parts of each arc.

White Wheel (1996) includes a pair of semicircular spoke arrays held by a tapering sled structure. The arrays face each other, nearly touching, nearly making a circle. Along the edges of the spoke set stretches a nylon ribbon, a pure arc except at its centre where tension from main hanging struts make a dimpled interval. This is effectively a

textile monad: a single warp, supported by a weft series, arranged as a simple quantum. Zero increasing to full and returning to zero.

By contrast, the wall-mounted group is fragmentary. There, instead of extending an established language, Seelig seems to be raising questions. Seelig opens the refined vocabulary of the previous work, embracing layered patterns, subtle graduations of reflection and a complex surface treatment approaching the intertwined calligraphy of a middle-eastern *qufic*. A provisional set of parts extends across rough-rendered plaster wall-thickets of bent rings, counterbalanced weights, gossamer scrims so thin that their shadows are more visible than their actual forms.

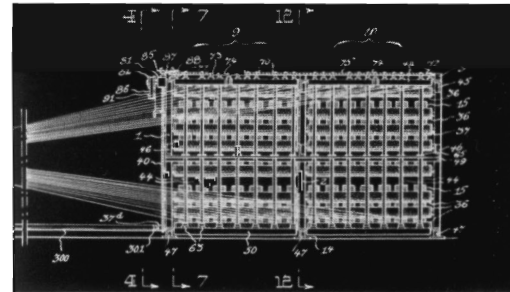
Development

The membrane-and-skeleton constructions culminate thirty years of work. This development is progressive, leading from industrial textile engineering to textile approached as an increasingly free discipline. In fact the development carries the legacy of several family generations: Warren Seelig is the great-grandson of a superintendent in the Pontoosuc Woolen Mill, Massachusetts, the grandson of a textile machinery designer and the son of an engineer and inventor of textile machinery. Drawing on this heritage, his early training included engineering foundation studies at the Philadelphia College of Textiles and Science followed by a Master's Degree in Fine Art at Cranbrook Academy of Art in the early 1970s, where he was exposed to Constructivist art theory and Bauhaus design method.

The younger Seelig acquired an international reputation following his time at Cranbrook. He reacted against contemporary work of such peers as Magdalena Abakanowicz which emphasized primal organic forces and raw emotion by extending his own work's impersonal qualities. He developed loom-based work featuring technical rigor, pure materials and simple forms. He referred to early Modern theory to support his commitment to formal abstraction, in particular to Wilhelm Worringer, whose writing erected elemental simplicity as a refuge against the 'trivialized' modern world. Worringer said "Just as the

Membranes are typically machine sewn, of synthetic fabric: Tyvek, a spun-bonded olefin fiber, heat pressed; noseum, a very fine mesh composed of polyester fibre, warp-knit; nylon mesh, neoprene coated and warp knit (a material used for hold-down tarps in the trucking industry), or leno woven nylon, a knit fabric with warps twisted to give an interlocking, stabilized weave.

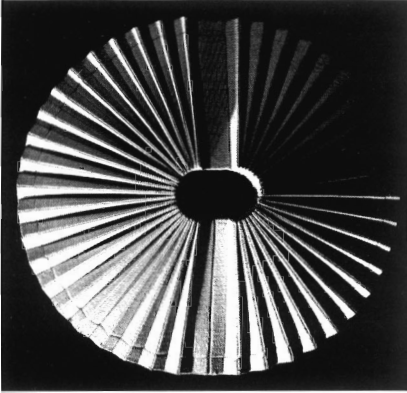
Skeletons are of stainless steel rod stock, silver-soldered or brazed, with forged and drilled connection flanges. Two general systems are used: spoke arrays radiating from axles, and stiffened strut structures formed into sled and rack configurations. Collars and stops are of lathe-turned stainless or brass using tap-and-die fastening, or of polyethylene and neoprene. Counterweights are lathe-turned stainless steel.



Creel (c. 1959), Patent drawing, Oliver Newton Seelig

Warren Seelig's father Oliver Newton was responsible for research and development at the Narrow Fabric Corporation, Reading, Pennsylvania, working there from 1957 to 1969 and then under its successor, Wyomissing Corporation, until his death in 1988. During that time he was awarded twelve patents involving a broad range of textile production machinery.

Seelig Sr. invented new machinery dealing with the finishing of fabric surfaces, burnishing rollers for both fabric and paper, a 'creel' design used in the warping of threads for power looms, and new jacquard loom designs involving mylar tape to replace the older punch-card technology. Many of his drawings focused on details of larger machinery. Geared transmissions translate the motion of rotating axles, chain and belt drives into interlinked arrangements of rollers. Oil-driven pistons and universal-joint flexible connections were included, reflecting new sophistication in post-war manufacturing technology.

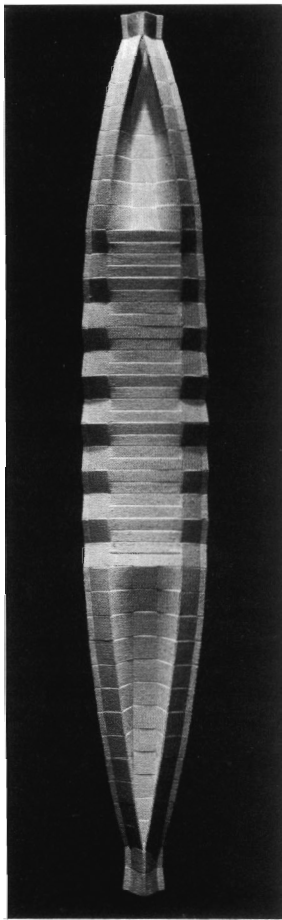


Conjuncture #1 (1978), cotton, 18 x 20 x 3.5cm

Their most powerful urge was, so to speak, to wrest the object of the external world out of its natural context, out of the unending flux of being, to purify it of all its dependence upon life, i.e. of everything about it that was arbitrary, to render it necessary and irrefragable, to approximate it to its absolute value.

Wilhelm Worringer, *Abstraction and Empathy, a contribution to the Psychology of Style* (1906) trans. M. Bullock, London and New York 1953

Vertical Shield #2 (1977)
cotton with mylar inserts
37 x 250cm



urge to empathy as a pre-assumption of aesthetic experience finds its gratification in the beauty of the organic, so the urge to abstraction finds its beauty in the life-denying inorganic, in the crystalline or, in general terms, in all abstract law and necessity.”¹ A key strategy for Seelig during this time was the conducting of mechanical operations – folding, gathering, cutting – for the purpose of generating a new kind of substance free from literary reference and self-indulgent emotion.

Seelig’s work after Cranbrook initially confined itself to ordinary black and white cotton string, employing a double-cloth loom technique involving simultaneous construction of two separate weaves within a single fabric. Seelig explored sculptural qualities – swelling, fluted surfaces, arches, radiating folds – within wall-mounted works. At first Seelig made three-dimensional forms in which flat, double-woven and splint-reinforced facets were supported along their back surfaces by a structural network of miniature struts and guys. This external system then shifted, indicating a new integrated approach. Using pockets formed between woven layers, Seelig inserted pliable plastic and mylar splints during the weaving. These flexible spines were entirely encased, and acted in concert with woven layers, yielding crisp pleats within folded fan-shaped textiles. Expanding them from ninety degree fans to 180 degree curves, and developing framed perimeters of banded and checkered panels, Seelig found striking highlights and shadows in the reliefs. With folded top and bottom edges in tapered or arched gathers, the textiles became self-enclosed figures: shields and totems.

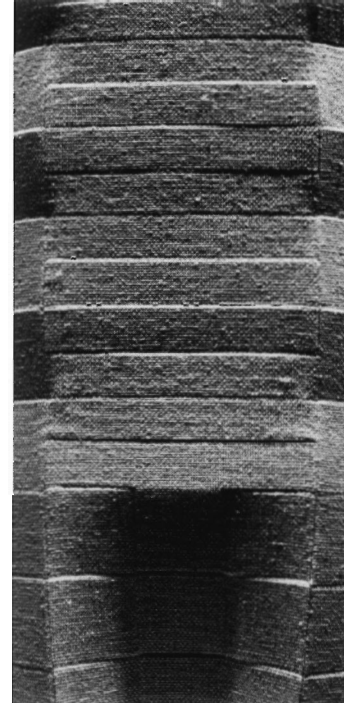
A hybrid material quality is a defining aspect of the work from this period. The double-cloth fabric skins enveloping and stretching over the internalized plates created a new material based on controlled internal stresses. Seelig has said, “I was not attempting to mimic anthropomorphic form, but rather attempting to create a relationship between the skeleton and skin elements which was as convincing as bone pressed against skin.” Also telling is his description of working method: “Sometimes, when selective plates were omitted, the internal stress dynamic of tight and loose cloth created a fluted edge, as in *Vertical Shield #2* (1977). The folded and rounded

‘totem’ forms and creased and pleated fan shapes were the result.”² This description alludes to Seelig’s preoccupation with anonymity. Instead of personal expression, the work was apparently the product of an impersonal process. That process does seem almost mechanical: he performed operations with scrupulous care and determined the final form of his constructions according to the results. However the results – swelling totem forms, complex shaped weaves – contained qualities too compellingly sensual to be entirely explained by an ethos of selfless work. A tension is apparent in which an urge to achieve a rich and dramatic palette of material qualities underlaid the artist’s public aura of impersonality and rigorous industry.

This tension was increasingly pronounced in work of the following years. Between 1977 and 83 Seelig developed a new series titled *Ribbon Folds*. Eschewing exotic material such as silk, the artist used base cotton. However by working in *grosgrain* – a dense warp-face rib weave with fine mercerized thread yarns at densities up to hundreds of threads per inch – he achieved extraordinary lustre. High-key combinations of striped and checked patterns exuded glistening colour that seemed embedded within the threads. He began using simple armatures to hold wide swaths featuring back and front surfaces of a length of cloth arranged in simple creases and folds. Welded and painted sheet-aluminum hangers shaped the cloth like vestment. One body of work employed a composite of coloured double-cloths accompanied by painted wood flats and dowels to form abstracted window shades. Another featured assemblies of dyed wood slats arranged to emulate draped cloth, a disembodied cousin of the earlier striped ribbon folds.

Matrix

Starting in 1981 Seelig increased attention to the essential structure of weaving and developed a new approach. He produced *Checkerboard Awning* that year during a residency at the Fabric Workshop in Philadelphia. Spokes and ribs introduced as structural elements in that work quickly developed into a new vocabulary. Expanding the approach into a wide spatial complex, he conceived an interplay of hybrid weft and warp elements. Weft elements became an ordering system of props and struts,

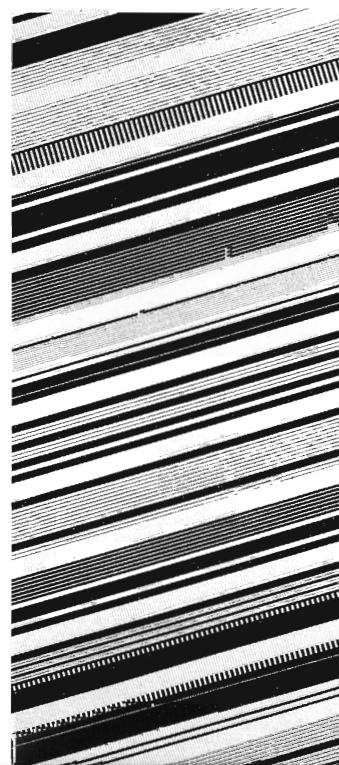


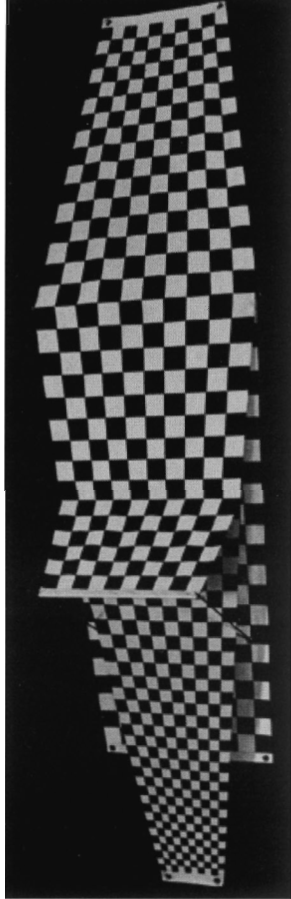
Detail, *Vertical Shield #2* (1977)
cotton with mylar inserts

Once understood, the structural language of cloth becomes a way of thinking: it is a language of mathematical systems and a uniform alphabet of symbols which describe the movement of line, formation of pattern, and construction of fabric surface. Analogous to musical notation, the language of textile communicates most profoundly in abstract, non-objective form.

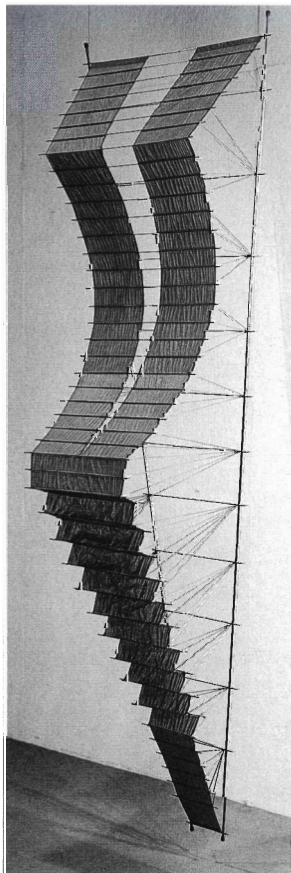
Warren Seelig, *Ribbon Folds* (1983)

Grosgrain detail, *Ribbon Fold* (1982)





Checkerboard Awning (1981)
printed cotton with steel frame
170 x 35 x 25cm



Florida (1988)
rip stop nylon, steel frame
270 x 45 x 45cm

built as metal skeletons. Warp elements in turn became ribbon shaped screens and meshes stretching between weft supports and describing pure geometries – a reversal of the traditional hierarchy of dominant warp and subservient weft imposed by loom mechanics. A nylon fabric and stainless steel wall suspension developed for Hewlett Packard in Palo Alto, California in 1986 employed a network of spokes radiating from support strut arrays in front of the wall surface. Membranes of translucent nylon stretched between these struts, following the arcing and fluted paths determined by the framework.

In contrast to the concealed members that Seelig previously used to support woven shapes, this structure was exposed. The space of the work changed from closed fabric surface to an open matrix. Where fabric elements were previously constructed by hand loom, now they came from special industrial sources. Seelig used meshes of almost microscopically fine warp-knit plastic fibre and Tyvek, a heat-pressed translucent membrane. Amplifying the expansive spaces projected in the work, transparency and lightness marked the material palette of the emerging work.

It is tempting here to think of Seelig keeping company with Minimalist artists. Like the ethereal white square which floats on Kazimir Malevich's *Suprematist Painting No. 1* (1918) the discipline of these open textile matrices invokes a universal state. Seelig's current statement: "When yielding to its natural geometric form textile becomes an energy field which increases in power proportionally to its abstraction and simplicity"³ seems cousin to Malevich: "I have transformed myself in the zero of form."⁴

Turn

Yet with the new figures in this exhibition Seelig's long standing wish to achieve an essential purity seems to have turned. While Plato's absolute geometry still plays in some arcing and circle figures, the purity of earlier taxis has changed into a tracery of higher mathematics: accelerating trajectories, planetary ellipses. Instead of completed forms, partial gestures prevail. These

inflected bodies are sensitive – their skeletal frames cast shadows on nearby walls, their fragile skins filter views of neighboring forms.

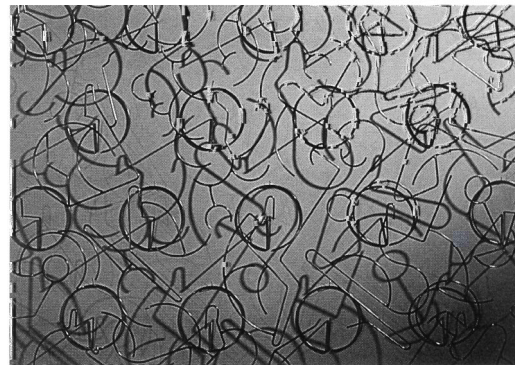
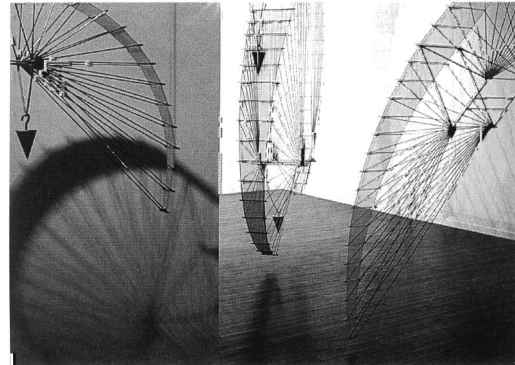
Here Seelig is approaching a reflexive mode in which the physical forms respond to the presence of the viewer. The play of shadows and filtered views is so pervasive in the space of the gallery that these usually-secondary effects shift to centre stage. Instead of emphasizing their separate identities Seelig chose to assemble the constructions into a general field using angles and overlaps to ensure that individual works will always be seen together with adjacent pieces. This arrangement challenges the identity of the work: is the space in the gallery really one large textile?

The wall-based work presented in the gallery confirms this possibility. Work in progress, this wall is a collection of samples and experiments developed within Seelig's studio during this past year. This newest generation of work rests on a broad curved plaster surface. Repeating many small elements each balancing on pivoting wall mounts, the fragments compose a hybrid brocade. The specific arrangements and groups of parts seem deliberately circumstantial. Instead of proscribed figures and frames, the viewer is anchored there by phenomena of light and hovering balance.

Kuba includes a spread of numerous turned rings with projecting arms. The arms are detailed with drilled and forged ends. Needles balance on these arms, each holding a silver-soldered arabesque of stainless steel wire. They stand informally, turning slightly according to air currents or the touch of the viewer, catching chromatic highlights from gallery lights and casting a dense scrawl of shadows behind. Like a jigsaw puzzle, the elements occupy individual territories of open space and lock together into a hovering surface. None of the parts touch, but as a whole they construct a tangible surface – qufic.

Composite Field is a collage of different parts. A large chalk-lined grid is lightly incised into the plaster wall. A staccato of support rings similar to those in *Kuba* works in counterpoint to the grid. Upon these rest families of

Installation view, *Machina Textrina*
left: detail of *Double-Ended Model* (1996)
right: *Yellow Wing* (1995); back: *Blue Oval* (1995)

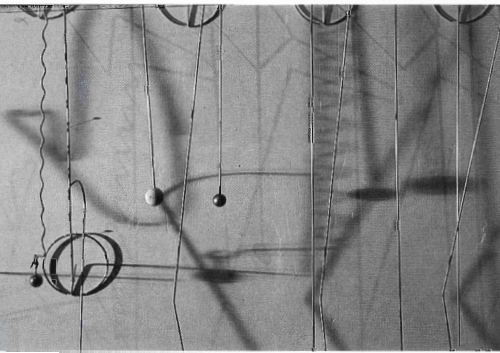


Detail of *Kuba* (1996)

elements. One group is made of serrated rings, alternately brass and stainless steel, coronal pulsing. Another is a jostling bundle of vertical counterweights made of angled wire stalks and polished brass ball ends. Another is virtually all shadow: a transparent veil of noseum fabric, embedded with horizontal seams each containing wire filament stiffeners, floats barely visible except for its cast pattern on the plaster surface beneath.

What emerges? The resulting complex makes a hovering surface. The surface seems woven from personal industry: touch, gesture, craft, machinings. This new work seems free of the ideological weight of early Modern work: empathy no longer seems antithetical to abstraction. The work no longer stands in reaction to raw primitivism: Seelig's subjects are no longer stripped and purified. Nor is he reacting against dominating forms, opening and rendering them transparent. Instead space seems already free, unconstrained.

By making his forms reflexive and his surfaces circumstantial, Seelig seems to have moved beyond his early strategy of minimalist discipline. Purity has been achieved, and a different project now seems possible – a substance, rooted in phenomena and developed through poetic economy. A new constructive play emerges, a refreshed complex of structure and light. Textile writ large.

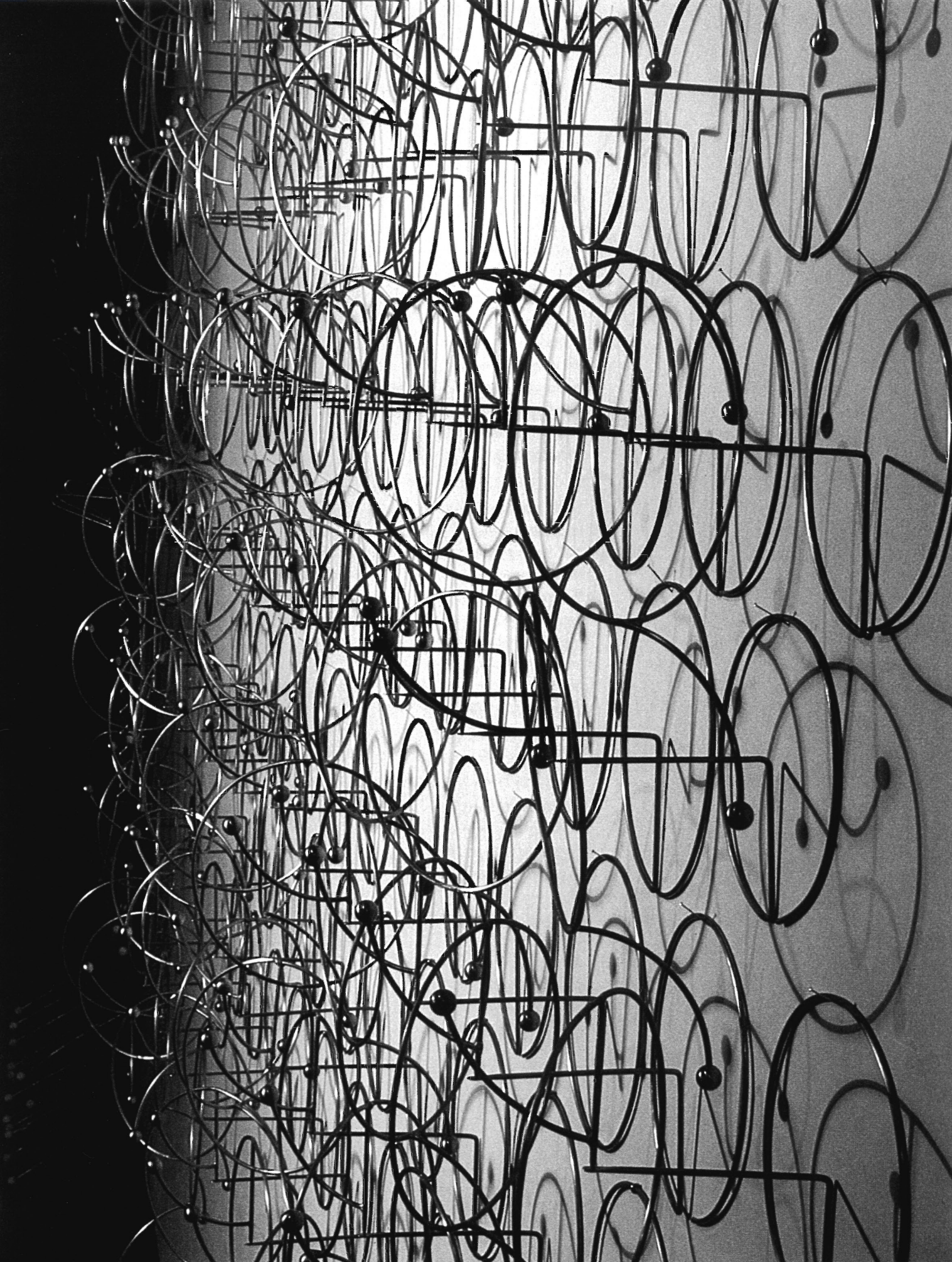


Detail of *Composite Field* (1996)
silver soldered stainless steel and machined brass

Notes

1. Wilhelm Worringer, *Abstraction and Empathy, a contribution to the Psychology of Style* (1906), trans. Michael Bullock, (London and New York, 1953).
2. Warren Seelig personal correspondence, (1997).
3. From introductory statement, *Warren Seelig Machina Textrina*, (1996).
4. Kasimir Malevich, *From Cubism and Futurism to Suprematism: the New Realism in Painting* (1916), trans. Anderson, (Copenhagen, 1969).

Detail of *Ball and Ring Field* (1996)
silver brazed stainless steel and machined brass



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