TEXTILES have long been a part of the canon of Western architecture—from the folds of draped female forms in ancient Greek temples to the abstract Mayan patterns “knitted” together in Frank Lloyd Wright’s textile block houses of the 1920s. Yet just as any façade may conceal what’s inside, architecture’s shared history with weaving is often obscured. Today architecture sits at the top alongside the “fine arts” of painting and sculpture, while woven textiles occupy a less prominent position in the “applied” or the “decorative arts.” Appearing natural now, few remember that the hierarchy of the arts was not always so stable. Architecture and weaving were both at the bottom in the Medieval Period—positioned as “mechanical arts” requiring learned manual skill rather than individual creativity or intellectual drive. Eventually, through hard lobbying by Renaissance artists and humanists, the establishment of art academies dedicated exclusively to the teaching of architecture, painting and sculpture, and theoretical backing by Enlightenment philosophers, architecture separated from its mechanical compatriots to become one of the dominant “visual arts” of modernity, leaving weaving behind as handicraft within the category of the “decorative arts.” It’s no secret that women have been generally left out of modern visual art history and associated with the decorative arts. Through the lens of historic reexamination I present three examples of “weaving workshops” led by women, whose work not only intersected architecture at key moments in the twentieth century, but also challenged the hierarchical position and cultural agency of architecture.

In the early twentieth century, modern architects and theorists reacted to broad social changes brought about by Industrialization and social and political upheaval by rejecting the historic forms of the past. Partly due to theoretical build up from 19th century aesthetic debates on style and the value of ornament, modern architects theorized that even textiles, considered inherently ornamental within the interior, needed to be rejected if architecture was going to lead society towards a better future. In order for textiles to be reintegrated into the practice of architecture,
they would have to be reformulated as “functional equipment” rather than applied decoration, a conceptual struggle explored intensely by avant-garde artists and weavers across Europe.¹

Anni Albers entered into the Bauhaus after the height of the European debates on style and ornament. As an eager young German student in the late 1920s, she launched her artistic career at the Bauhaus, the experimental new school established in 1919 by the architect, Walter Gropius, during the Weimar Republic in Germany. Bringing all of the arts together under one roof, the Bauhaus sought to synthesize the fine and the decorative arts—with architecture acting as the mother of them all—a belief institutionalized by the mid-eighteenth century, practiced by Arts and Crafts reformers like William Morris, and inherited by modern architects like Gropius, Le Corbusier, and Mies van der Rohe. Like almost all of the female students at this time, Albers was placed in the Weaving Workshop, led by technique master, Gunta Stolzl, supplemented with classes led by form masters like Johannes Itten.² Despite the fact that the Bauhaus was one of the most liberal art schools of its time, gender roles were still medium-specific—men painted, sculpted, and designed buildings, while women wove textiles, threw pots, and made crafts.³ This paradox—democratization of the arts without democratization of artists—led many Bauhaus women artists to become accomplished weavers because of the restriction placed on them to study the “higher arts” of painting, sculpture, and architecture. At points in the 1920s and 1930s, the Weaving Workshop represented the most financially successful sector of the Bauhaus, showing tapestries at industry fairs across Germany and eventually licensing designs to manufacturers.⁴ When the focus of the school shifted from one-off designs to prototypes for mass-production, Albers embraced the transition without pause. For her as a student and later as a practitioner, hand weaving was not only an end in itself but a necessary prototyping process—an essential step that she would adhere to in America when machine looms came to dominate the textile industry from the 1940s on.⁵ Later, after emigrating to the US, and teaching at the experimental Black Mountain College, Albers gained international success in 1949 as the first woman weaver ever to have a solo exhibition at the MOMA in New York. Not only did this broadcast the achievements of a woman artist to an American audience at midcentury, it elevated modern weaving to the status of modern art, positioning woven textiles as a topic of conversation amongst the “higher arts.” While Albers’s show did not single-handedly set up textiles as an equal to architecture, the event signaled a positive shift in the perception of modern textiles; one that gave more weight to the intellectual and creative capacity of the modern weaver’s practice.

Albers wrote about her work extensively, including two books—On Designing (1959) and On Weaving (1962). These volumes embedded weaving deeper into the modernist discourse. Within the field of architecture, there is a long history of writing critically about building—from Vitruvius to the present—but there was no such long history of writing by women weavers until members of the Bauhaus, Albers included, intellectualized the practice from within.⁶ Weaving—as craft—

⁴. Ibid.
⁶. Smith focuses on the mostly unpublished writings of Bauhaus weaver, Otti Berger, who was a contemporary of Albers.
had been first dominated by men and then generally limited to the “passing on of patterns.” Like infamous critics such as Clement Greenberg and postwar American painters like Mark Rothko, Albers wrote about her experiments at the loom to construct a theory for weaving, inventing, along the way, a vocabulary unique to the structures, process, and experience that making and viewing textiles could produce. She set out to both instruct her fellow weavers and students on the making of textiles, along with provide disciplinary boundaries that would set up weaving as an artistic practice. She defined a “tactile sensibility” to her practice, writing, “if a sculptor deals with volume, an architect with space, a painter with color, than a weaver with tactile effects.” In this statement Albers removes weaving from the craft category by inserting it alongside recognized artistic disciplines, arguing that weaving harnessed unique visual and haptic properties. Rejecting ideology that depicted weaving as gendered craft, Albers set up the parameters for a proto-discipline in which weaving could be considered an authoritative field onto itself, supportive to architecture but not subsumed within it. Her work, writing, and teaching influenced multiple generations of textile designers, an influence which can still be felt today.

Whereas Albers set up a conceptual framework for textiles to engage with modern architecture in the prewar period, Florence Knoll commodified ideas of modernism through textiles in the postwar period. Trained as an architect under influential émigrés from the Bauhaus and Scandinavia, first at the Cranbrook Academy of Art in Michigan under Eileel and Loja Saarinen, then at the Architectural Association School of Architecture in London, and completing her degree in 1941 at the “New Bauhaus” in Chicago (now known as the Illinois Institute of Technology), Knoll came into contact with many of the European “giants” of modernism, including architects Walter Gropius and Mies van der Rohe. Florence started her career as an architect at Harrison & Abramovitz, specializing in interiors, not because of the “integrated design” influence of her academic mentors, but because of the social conditions that restricted women from prominent roles within the architectural profession. In postwar America, sexism within the architectural profession was not yet a recognized practice to be fought against; it is remarkable that Knoll was able to secure a place within an architectural firm at all. However, in 1943, Knoll’s career shifted dramatically after freelance interior work for a client morphed into a full-time business partnership with her client, Hans Knoll. As historian Gwendolyn Wright pointed out in 1977, the traditional roles of women in architecture included “exceptional women,” “adjunct,” “anonymous designer,” and “woman outside.” From Knoll’s background it does not appear that she wished to remain anonymous or outside; rather, she found an unconventional way to play a part in architectural production. After marrying Knoll and investing in his small-scale furniture company, Florence developed a furniture line through key commissions from her network of established architectural colleagues and up-and-coming designers, turning the Scandinavian-influenced tables and chair company into a full-scale, modern design and planning company. Against the backdrop of American optimism and a belief that good design could make positive changes in people’s lives, Knoll’s Planning Unit team developed the “Knoll Look”–a sleek, sophisticated interior that visually represented the speed, strength, and technological innovation that American companies strove to embody in business in the postwar period.

The production of textiles in-house became a vital component to the company as the Knoll
Planning Unit gained more commissions. For the earliest commissions, Knoll did not produce her own textiles; instead she outsourced the upholstery and drapery for the custom-designed furniture. The Rockefeller family offices were one of her first commissions in 1946, recommended to her by one of her former bosses, Wally Harrison, and Howard Meyers, editor of Architectural Forum. Lore has it that Knoll had to search within men’s apparel fabrics to find the appropriate material to upholster an office chair, settling on men’s suiting fabric to fit the bill. The demand for appropriate upholstery and drapery fabrics was a priority to the firm, as it was only a year after she joined that Knoll opened a showroom on East 65th Street in New York to sell the first collection of Knoll Textiles. Knoll hired the most talented weavers and designers to design the first collection, including Marianne Strengell of Cranbrook University and half a dozen others, eventually hiring an entire team of textile designers to design both hand-woven textiles and textiles meant for machine loom production.

Highly textured weaves using new fibers such as rayon and plastics came out of this creative hotbed, surpassing utilitarian requirements to receive widespread recognition in architectural circles and in museum exhibitions such as MoMA’s Good Design exhibition in 1951 and the Textiles USA show in 1956. Upholstered furniture and drapery were two components of the Knoll look that became focal points within projects. Success, financially and in terms of innovative textile design, depended upon designs that could be mass-produced and easily plugged into interiors like a kit-of-parts, but sophisticated enough to appeal to her high profile clients, like the architect, Eero Saarinen, and CBS president, Frank Stanton. Knoll used textiles as the crucial communicator between elements—color and texture could be repeated on a sofa seat or a sheer curtain to create a visual rhythm—without disrupting the smooth, clean lines of a modern interior. In the decade and a half in which Florence was the active cre-
ative director of the company, the Textile Division flourished as an artistic think tank—multiple disciplines working alongside each other to take one material to the highest level of aesthetic complexity, structural integrity, and durability. She advanced the commercial market for textiles at a critical stage in American postwar architecture, facilitating the reproduction of modern architecture on a grand scale by first styling the materials, then the client, to foster the need for modern fabrics. Overcoming barriers placed on her as a woman architect at midcentury, Knoll produced modern architecture as an influential tastemaker, defying ideology that had excluded women from significant roles in architectural production.

Moving into the present, the work of Dutch textile designer, Petra Blaisse, has received international recognition for her breathtaking curtains and wall treatments. Known within the architectural community as the “one who makes curtains,” Blaisse’s influence has extended beyond the realm of the decorative arts into a new terrain that defies traditional boundaries between decoration and structure. In other words, her work is architectural, structurally complex, and yet strikingly elaborate in pattern and form. Blaisse is the first to call her work architectural, even though she does not hold a professional license or construct buildings.18 However, her critical awareness of the vocabulary of modern architecture has inspired critics to draw links between her practice and that of prewar textile designers like Lilly Reich at the Bauhaus, whose early collaboration with Mies van der Rohe, investigating the limits of the free-standing “textile wall,” share much in common with Blaisse’s alliance with Rem Koolhaas.19 While Reich first challenged the notion of the curtain as decoration within avant-garde architecture, draping sensuous black and red velvets and yellow silks over plates of vertical glass within the 1927 Velvet and Silk Café in Berlin, defining flexible interior spaces, Blaisse assigns the curtain even more responsibility in order to investigate the limits of the textile to perform like architecture.20

Blaisse’s firm—Inside/Outside—often receives commissions well before construction starts, joining forces with architects and structural engineers at the conceptual stages of planning. In one of the most innovative, contemporary projects of our time—the Seattle Public Library (2004)—Blaisse...
was hired in 2000 to consult on all of the horizontal surfaces and to design a site-specific curtain for the interior auditorium, contributing ideas to solve functional problems like circulation, acoustics, and lighting, as well as addressing intangibles like mood and atmosphere. For the single—non-structural—vertical element, Blaisse designed a massive S-shaped curtain that wrapped around the interior auditorium like a living, breathing, sculptural wall. Asked to resolve acoustics for two spaces—the auditorium and the common areas outside—her team developed a double-sided curtain that suppressed noise at multiple levels, with a texture of plastic “bear hairs” woven on one side to buffer everyday library traffic and green and white vertical striped “fins” on the other to address acoustical concerns inside the theater. As she explains in *Inside/Outside* (2007), instead of using a traditional, heavy material like velvet, Blaisse opted for a bright, lightweight and technologically complex fabric that her firm spent several years developing through the investigation of the surrounding landscape and fauna. While any texture would do, her formal imitation of nature—through the thick coat of a wild animal—speaks to the depth of her theoretical investigations and the sophisticated range of her formal vocabulary. Blaisse’s surfaces—whether they be a synthetic bristle wall, a giant knitted felt curtain, or a digitally-printed aerial view of the countryside on wallpaper—critically activate a space by challenging the visitor to accept architectural norms, like solid walls and decorative curtains. Walls sway when viewers reach out to touch their seemingly tectonic surface while photorealistic grass printed flat on the floor looks frighteningly alive—so much so that visitors walk around it.

The field of textile design wishes it could claim her as their own, as does the discipline of architecture. Sometimes landscape architecture, sometimes sculpture, theater design, digital art, or an installation, in total her work is in dialogue with many disciplines but refuses to be pinned down. With renowned architects like Ben van Berkel and Caroline Bos of UN Studio, Kazuyo Sejima of SANAA, and Rem Koolhaas of OMA seeking her out to collaborate, Blaisse has upended the hierarchy of architecture over the decorative arts to embark upon a new, if not woven, terrain.

While Blaisse’s work demands attention within the architectural community, her work is, in part, indebted to the conceptual influence of both Albers and Knoll, whom were both passionately dedicated to their work despite patriarchal barriers that originally excluded them from their chosen field. At the beginning of the twenty-first century, architecture has extended well beyond the site of the building, and architectural production is not limited to material artifacts. Conceptual production of architecture—through theoretical upheaval, influence rather than power, subversive methods, and performative acts—has been as relevant to the study of women’s contributions to architecture as has material production. Without the expanded definition of architectural production I’ve outlined above, women would continue to be marginalized within the field. For architecture the opportunities are two-fold: new definitions allow for the reconsideration of historic moments and materials—such as the work of the three women I’ve presented, along with the reevaluation of what it means to be an architect practicing today, both of which contribute towards a more holistic view of women in architecture.

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