

Chapter 2

In Search of “Minimalism”— Roving in Art, Music and Elsewhere

This chapter provides you with an overview of some of the meanings that have been discussed under the label “Minimalism” to prepare the ground for a discussion of meanings that “minimalism” might assume for the design of interactive systems.

“Minimalism” is a term of many uses and diffuse boundaries. Time and protagonists of the exact coinage of the phrase differ according to perspective: The musician Steve Reich credited the critic Michael Nyman with the invention of the term and its application to music in the 1970s (Nyman, 1974); his colleague, Philip Glass, took Tom Johnson for the originator of the term. However, art critic, Barbara Rose, had already applied the term (along with her own conception, “ABC art”) to the music of Young and the choreography of Judson’s Dance Theater in fall 1965 (Rose, 1965a). She then credits Wollheim’s January 1965 article in *Arts Magazine* (Wollheim, 1965) with the formal introduction of the term. Yet, this again is subject to debate, as—taking usual lead-time into account—two articles by Rose herself and sculptor Donald Judd published in February 1965 (Rose, 1965b; Judd, 1975, 35) might have been written before. Looking further back, Judd had used the term writing about Morris’ work in March 1964 (*ibid.*, 118), and, even in March 1960, described Paul Feeley’s “confidence in the power of the minimal” (*ibid.*, 17). Furthermore, David Burliuk described the painting of John Graham as “Minimalist” in 1929, noting “Minimalism . . . is an important discovery that opens to painting unlimited possibilities” (*cf.* Strickland, 1991, 19).

One can safely assume only that the term “Minimalism” earned public attention during the 1960s and gradually replaced other, competing labels, such as the aforementioned “ABC art”, and “reductive art” (Rose, 1965a), “literalist art” (Fried), “structuralist” sculpture (Lippard, 1967), “object sculpture” (Rose, 1965a), “systemic painting” (Alloway, 1966), “specific objects” (Judd, 1975), “unitary forms” (title of Morris’ 1970 San Francisco Museum of Art exhibition) or “unitary objects” (Sandler 1968)—to mention but a fraction of the terms used only within art criticism.

“Minimalism” denotes the minimal, often in relationship to contrasting practices, and according to context, the focus of the minimal changes. Until today, no single definition has been agreed upon and some authors even deny its

possibility. To clarify the relative nature of the term, some recent examples are restated here:

Minimalism – “an artistic tendency whose ‘organizing principles’ were ‘the right angle, the square and the cube . . . rendered with a minimum of incident or compositional maneuvering’” (Colpitt, 1990, 1).

Minimalism – “a movement, primarily in postwar America, towards an art – visual, musical, literary, or otherwise – that makes its statement with limited, if not the fewest possible, resources” (Strickland, 2000, 7).

Minimalism was “the last of the modernist styles” and thus “a transition between the modern and the postmodern” (Levin, 1979).

“The only reason that I did any writing . . . is really the fact that the critics had not understood things very well. They were writing about Minimal Art, but no one defined it . . . People refer to me as a Minimal artist but no one has ever defined what it means or put any limits to where it begins or ends, what it is and isn’t” (Sol LeWitt in Cummings, 1974).

“This book . . . views minimalism neither as a clearly defined style nor as a coherent movement that transpired across media during the postwar period. Rather, it presents minimalism as a debate . . . that initially developed in response to the three-dimensional abstraction of, among others, Donald Judd, Carl Andre, Robert Morris, Dan Flavin, Anne Truitt, and [Sol] LeWitt during the period 1963–1968. . . . Minimalism was a shifting signifier whose meanings altered depending on the moment or context of its use . . . a field of contiguity and conflict, of proximity and difference . . . a new kind of geometric abstraction” (Meyer, 2001, 1).

Definitions of minimalism range from the specific to the broad, from the temporal to the technical, from the impossible to the dialectic—depending on the motive of the author. Some of these definitions are more difficult to use as a basis for this work, as specificity complicates translation into a different field, temporality limits the meaning of minimalism to a single movement. The more technical definitions promise the viability of comparison with other “movements” and the dialectic analysis proposed by Meyer shows potential for understanding the dynamics of artists’ self-definitions and their interactions with other practitioners, thus elaborating the essence of the term.

Yet, as the purpose of this overview is not to define minimalism within a particular context, but rather illustrate the broad range of meanings that was denoted by “minimalism” from the conception of the term sometime in the 1960s until the present day, a less strict approach is followed: For clarity’s sake, the sequence of appearance is oriented on genre and temporal order; whenever deemed appropriate, a definition that was useful within a narrow context is mentioned and set in relation with contrasting positions. Although there are some exceptions, such as the concurrence of Young’s and Glass’s first musical experiments and the development of Minimal sculpture in the New York art scene, this approach works quite well, as minimalism was first used to describe painting, then sculpture and film, then music and eventually literature before the term was applied to subjects only marginally connected to art. The validity of applying the term “minimalism” to a range of styles that span different disciplines is certainly motivated by this work’s aim of discerning meanings that might be transferred analogously to human-computer interaction, yet the

connection of the different minimalisms, particularly of those in dance, music and art, is strengthened by the history of personal relationships of the artists that created their works with something that might be called a common spirit.

2.1 Minimalism in the Arts

Minimalism in the fine arts originated in painting, and was later continued in sculpture. Its different protagonists created very different artworks, and followed different conceptions of reduction. In reduction, they focused on topics such as color, material, and structure. An important consequence was the establishment of the object-character of artworks, and the use of readymade materials. While this was first developed in painting (e.g. in the works of Reinhardt), it later culminated in sculpture (and was made explicit by Judd). Consequently, the overall Gestalt of an artwork evolved into a central aspect of minimalist art, and relationships that extended beyond the object, and included the spectator, became relevant to minimalist artists.

2.1.1 Rauschenberg, Klein and Newman: Birth of Minimal Painting

Perhaps the first “Minimal” paintings were created by Robert Rauschenberg in 1951, six works composed of from one to seven panels of rolled white enamel paint, pioneering the use of housepaint on unprimed canvas and preceding the black paintings of Frank Stella by seven years. The simple whites were produced with a lack of painterliness that leaves little room for a more extreme reduction; in contrast to Robert Ryman’s monochromes of the 1960s, Rauschenberg did not even concern himself with the calligraphy of the brush-stroke (Fig. 2.1). He describes his paintings with great avidity, however: “They are large white (one white as God) canvases organized and selected with the

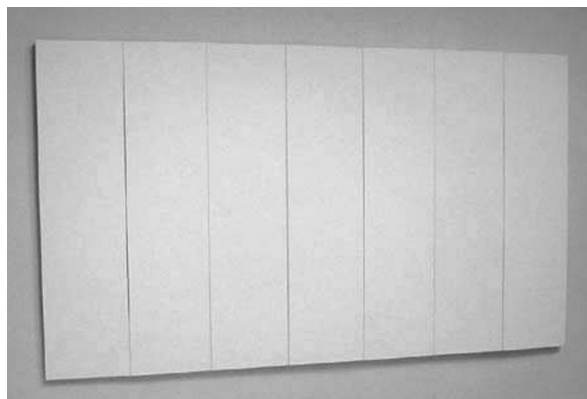


Fig. 2.1 Robert Rauschenberg: White Painting (1951). © VG Bild + Kunst, Bonn 2008

experience of time and presented with the innocence of a virgin. Dealing with the suspense, excitement, and body of an organic silence, the restriction and freedom of absence, the plastic fullness of nothing, the point a circle begins and ends. They are a natural response to the current pressures and the faithless and a promoter of institutional optimism. It is completely irrelevant that I am making them. Today is their creator" (quoted in Ashton, 1982, 71).

As Strickland (2000, 28) notes, "The paintings were not, however, as God- or nothing-like in practice as in theory"—they were instead viewer-interactive from the beginning: "I always thought of the white painting as being, not passive, but very—well, hypersensitive . . . so that one could look at them and almost see how many people were in the room by the shadows cast, or what time of day it was" (Tomkins, 1981, 71). Besides the extreme reduction of means, we also find the inclusion of the viewer as one of the prime characteristics of these works; their reception differs with a different setting or a different frame of perception as they hold only a minimal amount of pre-defined information themselves. In contrast to the monochromatic works of Josef Albers (a retrospective can be found in Albers and Weber, 1988), Rauschenberg broke with the focus on the relationships within the painting, he shunned the use of hierarchical composition and figure/ground contrasts that Albers had concentrated upon (Albers, 1963): "I had been totally intimidated because Albers thought that one color was supposed to make the next color look better but my feeling was that each color was itself" (Rauschenberg in Rose, 1987, 37–38).

Yves Klein, a world-class provocateur and an art celebrity for the last five years of his life (1928–1962), also laid claim on the creation of the first monochromes, although his proofs are rather insufficient (Strickland, 2000, 33–34). He contributed the ultimately minimal exhibition to art history at the Iris Clert gallery in Paris in 1958—described in the invitation as "the lucid and positive advent of a certain realm of sensitivity . . . the pictorial expression of an ecstatic and immediately communicable emotion" (quoted *ibid.*, 35). The gallery in question was empty; Klein himself had painted the immediately communicable walls with white paint. Klein is best known for his monochromes painted in "International Klein Blue" (or a deep royal blue). He chose blue over other colors: "Blue has no dimensions, it is beyond dimensions, whereas other colors are not. They are prepsychological expanses, red, for example, presupposing a site radiating heat. All colors arouse specific associative ideas, psychologically material or tangible, while blue suggests at most the sea and the sky, and they, after all, are in actual visual nature what is most abstract" (Osborne, 1988, 295). In addition, Donald Judd stressed in 1965 the influence of absence of compositional space: "Almost all paintings are spatial one way or another. Yves Klein's blue paintings are the only ones that are unspatial, and there is little that is nearly unspatial, namely Stella's work" (Judd, 1975, 182).

Sometimes counted among the minimalists, Barnett Newman is usually considered one of the most influential predecessors to minimalism as his work determined the visual appearance of minimalist painting despite him maintaining contradicting theories (Strickland, 2000, 55): he tried to limit references to

Fig. 2.2 Barnett Newman:
Untitled (1969). © VG
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the work itself noting, “I hope my work is free of the environment” (Newman et al., 1990, 272), and rejected the void created by reduction in e.g. Klein’s drawings (ibid., 249). Instead, his zip paintings (Fig. 2.2), the label stemming from the regularity of dividing the canvas into areas of different color, are not targeted at reduction, but rather try to create a unity of the whole artwork, “I feel that my zip does not divide my paintings . . . it does the exact opposite: it unites the thing” (ibid., 306).

2.1.2 Reinhardt: Art-as-Art

Ad Reinhardt was perhaps the purest minimalist painter, Sol LeWitt called him “the most important artist of the time” and producer of “the most radical art” (Zelevansky, 1991, 19) and Rosenberg identified him as “the intellectual pivot” of the Minimalist movement (Rosenberg, 1964). He most vividly contrasted Klein and Rauschenberg in character: against their theatricality he set what was described as an “eremitic aesthetic and [...] near-obscurant technique” (Strickland, 2000, 40) and what Reinhardt summed up in 1962 as “The one thing to say about art is that it is one thing. Art is art-as-art and everything else is everything else. Art-as-art is but art. Art is not what is not art” (Reinhardt,

1975, 53). Art-as-art describes the total rejection of context and creator as meaningful aspects of the work—a piece of art is only what it is, no more, no less. It is directed against the mystification of “simple” art and the displacement of visual abundance by elaborate explanations and interpretations. He also vehemently refuted attempts to relate his work to the action painting of e.g. Pollock: “I suppose there is always an act or an action of some kind. But the attempt is to minimize it. There are no gymnastics or dancings over painting or spilling or flipping paint around” (*ibid.*, 13).

Reinhardt tried to abolish all external references from his titles as from his paintings, most of which are simply signed “Untitled”, “Abstract”, or “Red/Blue/Black Painting”—often on the back of the canvas, not always including the date. His aim was to create “the last paintings which anyone can make” (Lippard, 1981, 158); he tried to achieve maximum reduction. His “Twelve Technical Rules” read as follows: “No texture . . . No brushwork or calligraphy . . . No forms . . . No design . . . No colors . . . No light . . . No space . . . No time . . . No size or scale . . . No movement . . . No object, no subject, no matter. No symbols, images, or signs. Neither pleasure nor paint. No mindless working or mindless non-working. No chess-playing” (Reinhardt, 1975, 205f).

The reduction in Reinhardt’s works did not come suddenly, it was a slow and steady development towards the minimal: “At many stages along the way, it seemed as if he had gone as far as he could go, but each year he reduced the elements in his art a little more” (Bourdon 1968). The premier example for his Minimalist works is the “black” paintings—he was far from being the first to explore black-on-black, as Rodchenko had executed a pure black in 1919, yet his approach is unique. The “black” paintings are not black at all; on close scrutiny, they are composed of deep blue, red and green pigments in various mixtures; he drew diagrams before executing his paintings that show that most of them consist of a nine-squares-within-a-square structure, with three different tones marked as “B”, “R” and “G” occupying the corners, the middle row and the middle upper and lower square, respectively (Zelevansky, 1991, 21).

Reinhardt used hues of blue, red and green so dark that various critics have noted that the normal museum visitor does not and, literally, cannot see these paintings: the ocular adjustment necessary to perceive the shades of color takes time the casual viewer does not spend on the paintings; thus, they are often dismissed as a joke (Fig. 2.3). For the darkest, last paintings, only flashlight photography reveals the cruciform shape; Strickland notes, “from a phenomenological perspective, one might argue that they [the photographic reproductions] invent them” (Strickland, 2000, 49). Although the suggestion has been made frequently, the reason for the choice of color, or rather non-color is arguably not a religious one, as is the shape only superficially reminiscent of a cross: “The reason for the involvement with darkness and blackness is . . . an aesthetic-intellectual one . . . because of its non-color. Color is always trapped in some kind of physical activity or assertiveness of its own; and color has to do with life. In that sense it may be vulgarity or folk art or something like that”

Fig. 2.3 Ad Reinhardt:
Abstract Painting
(1960–66). © VG
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(Reinhardt, 1975, 87). He thus extends Klein's dismissal of all colors except blue to a complete dismissal of color for its relation to life and thus its potential "folk art" character; again, art is only art-as-art.

Beginning with the choice of the square as the simplest geometrical form as the basis of the structure of the painting and then further reducing the structure to the point of indiscernability by minimizing value contrasts, Reinhardt tried to achieve the greatest abstraction in painting. He even refrained from taping his canvases to avoid the "miniscule ridge which might define the border between squares and ... destroy the flatness of the surface" (Strickland, 2000, 49). His paintings tried not only to be non-relational in their inner composition, but also to be non-referential; he went so far as to drain the oil from his paints to reduce reflections: "There should be no shine in the finish. Gloss reflects and relates to the changing surroundings" (Reinhardt, 1975, 207). He did not view the individual canvas as an almost sacred source of inspiration, as the Abstract Expressionists did; although he employed painstaking brushwork to remove all traces of brushwork from his paintings, he has more in common with the Minimalist sculptors who "only" planned their works before they were industrially executed: When one of his works was damaged, and the museum asked him to repair it, he offered to substitute another version. "But you don't understand, Mr. Reinhardt," he was told. "Our Committee especially chose this one." "Listen," the painter answered, "I've got a painting here that's more like the one you've got than the one you've got" (Hess, 1963, 28).

2.1.3 *Stella: To See What Is There*

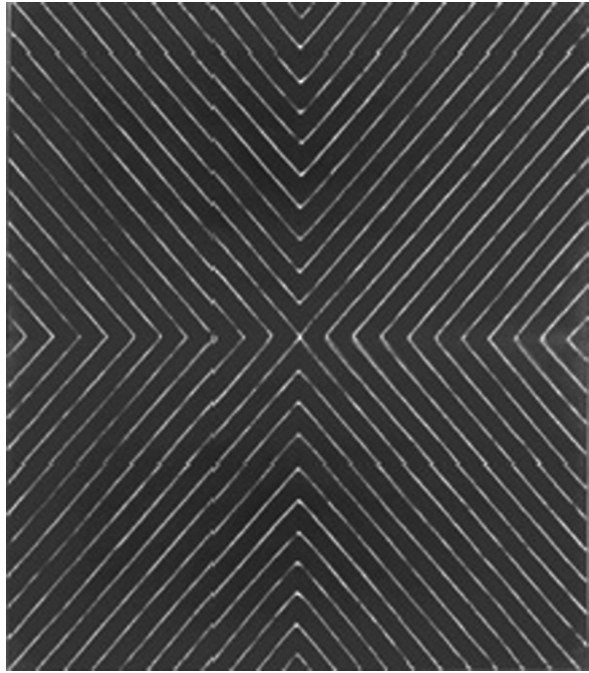
Between art critics, an argument developed in retrospect whether Reinhardt should really be considered minimal as he simply further reduced “pictorial asceticisms” from the past. Reinhardt was compared with Frank Stella who was more concerned with pure surface. Among others, Rosalind Krauss tried to differentiate them in her explicitly revisionist review: “it soon seemed obvious (in 1963) that what (Reinhardt’s and Stella’s ‘black’ paintings) had in common was, nothing” (Krauss, 1991, 123).

Without doubt, however, is Frank Stella, another of the central figures of Minimalist painting; he presented his first exhibition at the Museum of Modern Art an almost unbelievable two years after his college graduation, yet it took art critics until 1965 to agree that “the uncommon strength and integrity of Stella’s young art already locate him among the handful of major artists working today” (Rosenblum, 1965). In contrast to the obscurity of Ad Reinhardt’s near-black paintings, Frank Stella’s monochrome works that he arrived at in 1958 after experimenting with alternating bands of color, specifically red and black, expose both the crude technique and the unmodified enamel housepaint used: “I knew a wise guy who used to make fun of my painting, but he didn’t like the Abstract Expressionists either. He said they would be good painters if only they could keep the paint as good as it is in the can. And that’s what I tried to do. I tried to keep the paint as good as it was in the can” (Glaser, 1966, 157). In contrast to the perfectly symmetrical and carefully executed paintings of Reinhardt, Stella’s freehand technique resulted in an irregularity of the outlines of the bands and in an inexact placement (Fig. 2.4). The intent of Stella’s works was to create truly non-relational paintings: “The black bands and interstitial canvas are not separated but joined by his initially smudged borders, which provide the unifying effect . . . Stella’s smudging fuses the component lines on first glimpse, never allowing them an independence that would challenge the nonrelational, unitary effect he sought” (Strickland, 2000, 103).

The visual sparseness and detachment but foremost the repetitive elements of his paintings might have been influenced by Samuel Beckett, as Stella pointed out in an interview, “pretty lean . . . also slightly repetitive . . . I don’t know why it struck me that bands, repeated bands, would be somewhat more like a Beckett-like situation than, say, a big blank canvas” (Antonio, 1981, 141).

After the black paintings followed a series of “white” or “aluminum” or “notched” paintings; here again, although following Rauschenberg in color, the approach was radically different: rather than drawing patterns within the classic rectangular format, he cut out those parts of the canvas that did not conform to the pattern. This series is drawn only with verticals, the texture of the aluminum paint is smoother and the use of penciled guidelines creates an impersonal regularity in the pattern—often

Fig. 2.4 Frank
Stella:Zambezi (1959) ©
VG Bild + Kunst, Bonn
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seen as a precursor to the industrial streamlining of Minimalist sculpture. Stella became the principal figure in the new attitude of American “directness” and “anti-illusion”—he famously summed this up in an interview with Glaser (1966, 158) as “What you see is what you see”—only what can be seen is there. However, he was not alone in proposing this new sense of wholeness, with both Newman and Pollock preceding him; as Meyer (2001, 90) notes, “his painting-reliefs heightened an awareness of Rauschenberg and Johns ... The relationships were complex: the impact of Stella’s work ... elicited quite different readings.”

The uncompromising two-dimensionality of Stella could be seen as the end-product of an evolution of abstraction that had been started with the Cubists who had freed themselves from the window of perspective: “In Stella, the surface was neither a window into an illusionistic world nor a skin for tattooing, but everything, all there was. It is more than a facile oxymoron to note that the (anti-)spatial evolution of abstraction culminated in the concreteness of the object painting” (Strickland, 2000, 108). An important characteristic of Minimal Art, namely the development of the objecthood of art works, could be counted among Stella’s achievements; although the term had been used before by e.g. Rauschenberg (Colpitt, 1990, 109), Stella reversed the Duchampian notion of object-as-artwork into the artwork-as-object.

2.1.4 *Radical Minimalism and Post-Minimalist Painting*

Later minimalist painters further radicalized reduction, a tendency that might have been aided by the need to distance themselves from their predecessors. A most notable example was Robert Mangold (Fig. 2.5): “He has excluded from his work all such concerns as illusion, image, space, composition, climax, hierarchy of interest, movement, emotional content, painterliness, interest in materials or processes, and any sort of association or reference to anything other than the physical painting itself . . . To have produced work of intellectual and visual power with such severity of means is impressive, and he [Mangold] is certainly among the most important of the ‘Minimal’ artists” (Spector, 1974).



Fig. 2.5 Robert Mangold:
Four Triangles Within a
Square (1974). © VG
Bild + Kunst, Bonn 2008

Robert Ryman, known primarily for his “achromatic” paintings, created in experiments dating from 1958 and executed since 1965, was one of the few painters able to follow Stella with a distinctive style. His “white” paintings are less rigidly white, the bands often interact with the different colors of his supports, normally are contiguous, and often expressively brushed, without an attempt of art concealing art. This painterliness—although the bands are still parallel to the frame, the furrows of the brushwork “suggest[s] fine gradients of linearity” (Strickland, 1991, 110)—is in stark contrast to the bluntness of Stella’s works. Still, the explicit brushwork might be interpreted as a continuation of the reductivist aesthetic of economy and exposure of means, as Ryman stated, “There is never a question of what to paint, but only how to paint” (Art in Process at Finch College catalogue 1969, quoted *ibid.*, 110).

Richard Tuttle, a less prominent Minimalist figure, might have been the painter who expressed the objecthood of the artwork in most radical terms. Like Stella, he was rather young when he had his first show at 24 in 1965 at the Betty Parsons Gallery. He is known for the modest nature of his work: in the 1970s, his works consisted of an inch of rope or a foot of polygonized wire nailed to the wall. Although these works count among the least flattering in art history, they were judged to be “not beautiful. But ... in some sense outrageously ‘poetic’” (Perreault, 1968, 17).

A continuing refinement of minimalism can be observed in the later works of minimalist painters. As the most drastic or primitive interpretation of minimalism was already taken by Rauschenberg, more subtle forms of minimalism evolved. The question of defining a minimalist aesthetics emerged: What is a great work? How is art determined? The influential art critic, Clement Greenberg, defined artistic “quality” e.g. for the zip paintings of Newman that “look easy to copy, and maybe they really are. But they are far from easy to conceive” (Greenberg, 1962). Judd argued that a new kind of painting had been developed: “In earlier art the complexity was displayed and built the quality. In recent painting the complexity was in the format and the few main shapes ... A painting by Newman is finally no simpler than one by Cézanne” (Judd, 1975, 184). Judd used “interesting” as a criterion to determine works that are not “merely interesting” but “worth looking at”. While “Greenberg is the critic of taste behind every one of his decisions there is an aesthetic judgement”, “in the philosophic tabula rasa of art, “if someone calls it art,” as Don Judd has said, “it’s art” (Kosuth, 1991, 17).

2.1.5 Judd, Andre, Flavin, and Morris: Minimal Objects

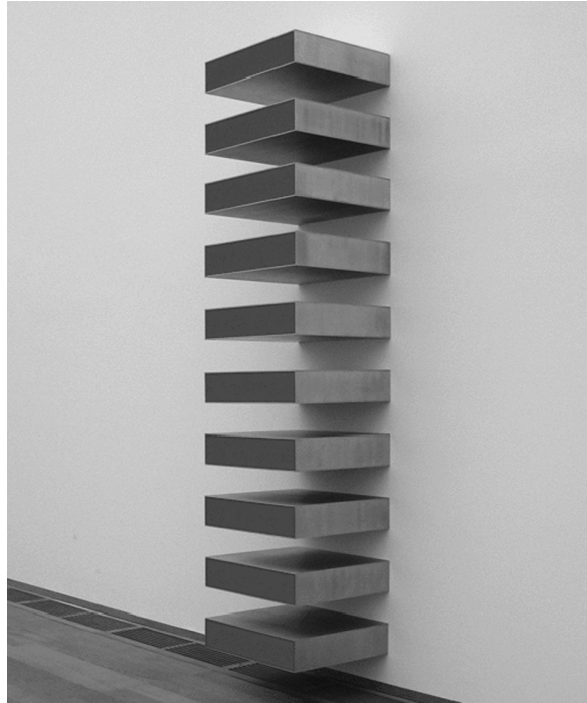
It looks like painting is finished

—Donald Judd

The role of sculpture in minimalist art is subject to scholarly debate. While for many artists and critics, sculpture provided new opportunities, after all possible reductions had been tried in painting, for others, the third dimension does not add significant new elements. Strickland notes: “The three-dimensional art is fundamentally an outgrowth of earlier work in its sister medium” (Strickland, 2000, 259).

Donald Judd, originally a painter, turned to sculpture as he disliked the “illusionistic quality of painting” and insisted on the necessity of working in ‘real space’; the very development that minimal painting took, further and further reducing composition and painterliness made it difficult to continue further within the same medium. In sculpture as well as in painting, the question about how far reduction could go was soon raised as technical bravura and richness in composition or color lost their importance. By the end of 1964, Judd

Fig. 2.6 Donald Judd:
Untitled (1976), Flick
Collection Berlin



no longer created his sculptures by himself, but rather “sent out plans for works to factories, whose superior execution, he felt, would make his work perspicuous” (Meyer, 2001, 81; Fig. 2.6). As the new art approached the asymptotic limit of the readymade and the bare canvas, it became “concept art”; yet, at the same time, this opened the doors for criticism—Kramer suggested that this art was too easy to reproduce to be called art, “the work wasn’t crafted enough . . . too simple to look at . . . boring” (ibid., 81).

In a discussion with Frank Stella, who was named as a principal influence on the object-sculptors, Donald Judd, one of the most prominent of minimalist sculptors, identified himself as seeking for wholeness in painting. This was the reason for symmetry in his work as he “wanted to get rid of any compositional effects, and the obvious way to do it was to be symmetrical”¹ (Glaser, 1966). Naming Newman as an example, he insisted that “You should have a definite *whole* and maybe no parts, or very few . . . The whole’s it. The big problem is to maintain the sense of the whole thing” (ibid.). As Judd and Stella both knew nothing of similar tendencies in European art (Meyer, 2001, 88), they identified this objection to relational composition as a major feature of the typical American minimalism. An important aspect of minimal sculpture is thus the

¹ Judd later elaborated this position in “Symmetry” (1985, reprinted in Judd, 1975, 92-95).

wholeness of Gestalt; artists argued against the visual separation of parts in their specific objects. Retrospectively, wholeness became a key quality of both painting and sculpture (ibid., 134ff).

In the same interview, Judd places a strong verdict on previous approaches to minimalism; for him, “painting is finished” (Glaser, 1966). At the same time, he insists that in form, “the new work obviously resembles sculpture more than it does painting, but it is nearer painting” (Judd, 1975, 183), and coins the term *specific objects* for Morris’ and his own work.

A prototypical work that was subjected to the accusation of trivial simplicity, and thus a lack of artfulness, was Andre’s *Lever* (1966) consisting of 137 aligned firebricks (Fig. 2.7); a satire “exhibition” at Chapman College in Orange, California, organized by Harold Gregor, director of the college’s Purcell gallery stated that anyone “could purchase a similar set of bricks and make an identical work”, even “the subtraction or addition of a few dozen bricks” would “in no way change its form . . . [that was] boringly minimal in content” (quoted in Meyer, 2001, 82). However, this critique too simply dismissed the *Lever*’s form as visually dull, and disregarded Andre’s intention of demonstrating the nature of the building blocks in his art that was “installed by Andre himself, who prized each brick for its own material sake; and understood by the artist to be perfectly continuous with the modernist tradition of formal innovation rather than a dadaist legacy” (ibid., 82).

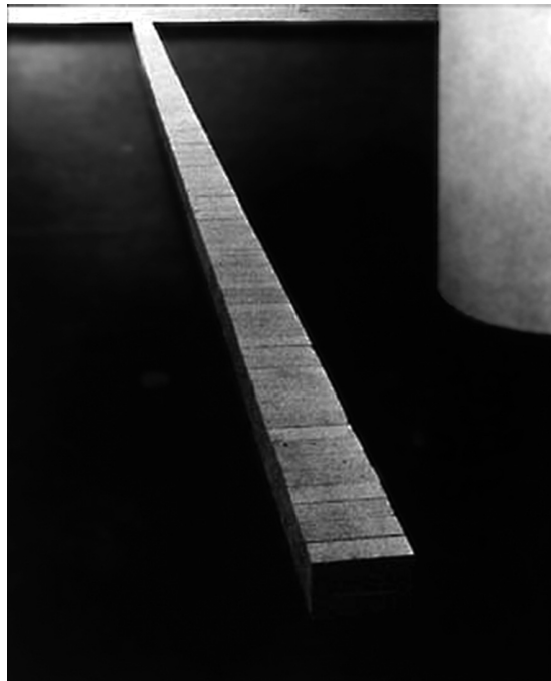


Fig. 2.7 Carl Andre: *Lever* (1966). © VG Bild + Kunst, Bonn 2008

The object character of minimal sculpture sharply contrasted even the most minimal painting. As one of the most radical protagonists of minimal sculpture, Dan Flavin used fluorescent light tubes for his works (Fig. 2.8)—while others like Judd developed his works out of industrial materials, he chose industrial objects as his medium, “My work becomes more and more an industrial object the way I accept fluorescent light for itself” (ibid., 92). Painting expert, Bob Rosenblum, noted that Flavin had thus “destroyed painting” for him (Judd, 1975, 189).



Fig. 2.8 Dan Flavin: *The Nominal Three (to William of Ockham)*, 1963. Estate of Dan Flavin / © VG Bild + Kunst, Bonn 2008

Robert Morris introduced an art that—as architecture—related to human scale, “Architecture, the body, movement — these are the terms of Morris’s early minimalism” (Meyer, 2001, 51). While his early artworks tried to interface with the context — as has been noted in different sources, a sculpture called “Column” was used as a prop in a performance at La Monte Young’s Living Theater in New York in 1962 (Krauss, 1977)—he later removed himself from “such allusions” and argued for a purely abstract art (Morris, 1966) before returning to architecture as a source of inspiration in the 1970s. Yet, even in his abstract period, he produced an art that was quite different from Judd’s plainly pictorial model. While Judd’s “Specific Objects” were there to ‘look at’, Morris’ works “were to be experienced by an ambient body that walked around, and through, the work itself” (Meyer, 2001, 51).

Returning to the question of wholeness, for Morris—who understood the term primarily in perceptual terms—only sculpture could be whole, a quality he referred to as *Gestalt*, as “wholeness seen”. Judd, who started out as a painter rather than as a performer, admitted he did not want to “consider the viewer I’m rather interested in what I want to think about, what I want to do”

(Glaser, 1966). While Judd carefully built and exhibited his works so that they could be seen, Morris consciously theorized the experience of his art by recourse to ultimate reduction, and proposed that “the most reduced shapes were the most desirable” (Meyer, 2001, 159). For his use of the pictorial relief, Morris even accused Judd of illusionism, “the autonomous and literal nature of sculpture demands that it have its own, equally literal space – not a surface shared with painting” (Morris, 1966), and claimed that “wholeness was an integral quality of sculpture alone, for wholeness could only be seen in three dimensions” (Meyer, 2001, 158; Fig. 2.9).

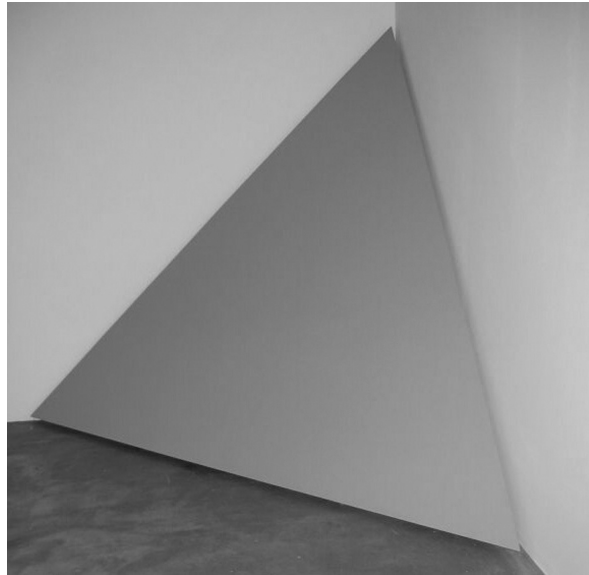


Fig. 2.9 Robert Morris:
Corner piece (1964). © VG
Bild + Kunst, Bonn 2008

In contrast with Judd’s pictorial conception of artistic sculpture, the Specific Object that “presents a static, articulated shape to a viewer’s gaze” (ibid., 51), Morris’ involvement in performance art included the architecture, the human body, and movement in his understanding of sculpture. Judd was the leading advocate of the position Fried characterized as “literalist” (Fried, 1966, 22)—the compulsion to rid art of illusion, which, resulting in the production of objects, rendered painting obsolete (Fried, 1998, 12)” (Meyer, 2001, 230), while “Robert Morris conceives his own unmistakably literalist work as resuming the lapsed tradition of constructivist sculpture” (Fried, 1998, 12).

2.1.6 LeWitt: Minimal Structure in Minimalist Sculpture

Sol LeWitt, a graphic designer who worked for I.M. Pei in the mid-1950s, contributed his focus on structure to minimalism: “his major achievement in the 1960s as the assorted cubical structures whose skeletal nature was

reinforced by their whiteness” (Strickland, 2000, 271). Echoing the five-foot square format of Reinhardt’s paintings, he built his works based on five-feet-cubed cubes. By exposing the structure of his works, he created a “sense of dematerialization akin to the experience of both X-rays and architectural plans showing us the fragile framework . . . which underlies the facade of daily existence” (ibid., 271).

Beginning with his second exhibition at the Dwan Gallery in New York in 1966, LeWitt experimented with white, modular open structures. He chose white as he considered it to be “the least expressive color” (quoted in Cummings, 1974)—white “enhanced the reading of his delicate geometries” (Meyer, 2001, 200). Feeling limited by the literalist tendencies of other minimalists and having the impression that “reductive Minimalism was self-defeating” (quoted ibid., 202), LeWitt used repetition to further expose not only the internal structure of an artwork but also the system behind the internal structure (Fig. 2.10). While the minimal object repressed its conceptual aspect, for LeWitt, geometry could become “a machine that makes the art” (LeWitt, 1978a). He chose the cube as it itself “is relatively uninteresting . . . Therefore, it is the best form to use as a basic unit for any more elaborate function, the grammatical device from which the work may proceed” (LeWitt, 1978b).

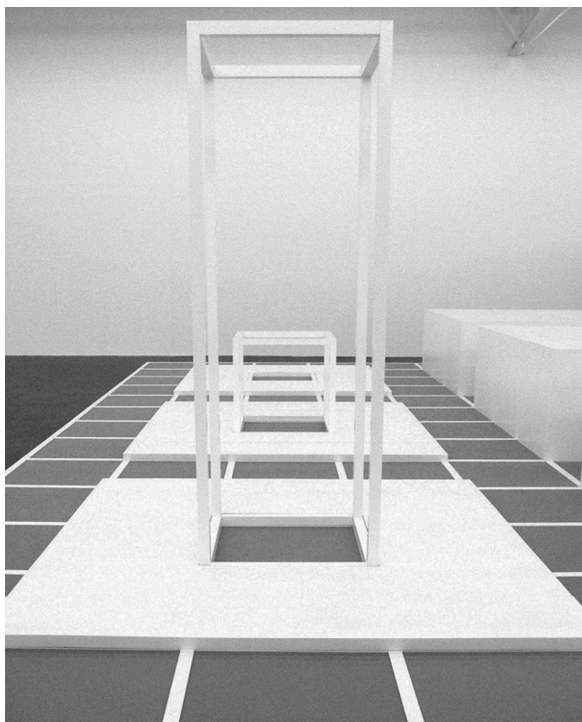


Fig. 2.10 Sol LeWitt: Serial Project #1, Set C (1966/85).
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2.1.7 Post-Minimalist Sculpture

Although minimalism itself is often seen as being limited to the 1960s (comp. Strickland, 2000, 6f), it formed an impression of art that was to last longer. Richard Serra, like Judd originally a painter, ranks among the most popular post-minimal artists. In his massive, stark works, optical qualities of minimalism are mirrored. However, most of his works “have an inherently more kinetic and menacing aura than the static and indifferent quality of earlier Minimal sculpture” (ibid., 290; Fig. 2.11). The monumental nature of most of Serra’s later works tends to ignore the spectators, or at least make them feel insignificant; in his *Stacks*, massive sculptures “do not threaten to collapse on the spectator, enclose him in a vise, or even block his exit. They merely face each other and ignore him” (ibid., 291).

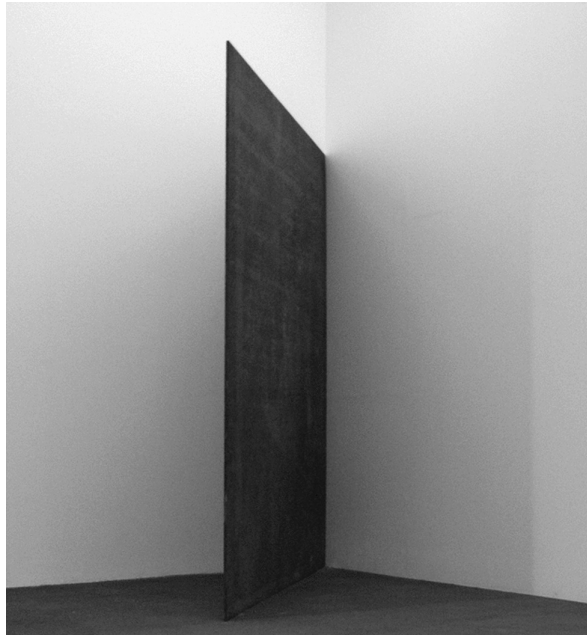
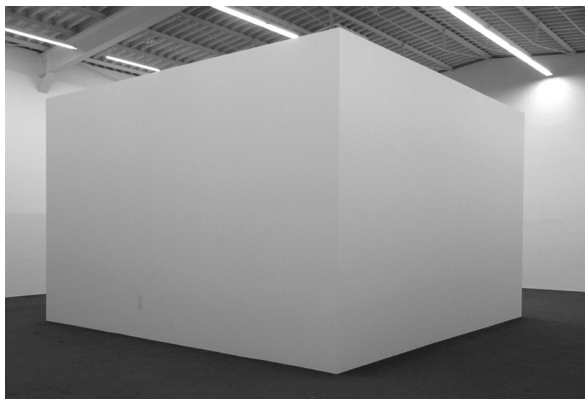


Fig. 2.11 Richard Serra:
Strike (1970). © VG
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Other artists took different and more inviting approaches to interacting with the audience. The non-communication of spectator and artwork was inspiration e.g. for Bruce Nauman’s *Sealed room* (Fig. 2.12). In this sculpture, a room—four perfectly blank, white walls—is both presented to and hidden from the visitor. There is no way to determine what the sculpture looks like from the inside and, to add to this suspense, a humming voice is created by several large fans inside the sculpture. The artwork presents no image, and thus becomes a projection wall for the spectator’s imagination.

Fig. 2.12 Bruce Nauman:
Sealed room—no access
(1970). © VG Bild + Kunst,
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2.1.8 Minimal Art: Art as Art or Cooperative Sense-Building?

*For the listener, who listens in the snow,
And, nothing himself, beholds
Nothing that is not there and the nothing that is.*

—Wallace Stevens, *The Snow Man*

Although the first impression of a work of Minimal Art may be bewildering, it is also intriguing; it generates a need to explore, to solve the “puzzle”, to fill in the details missing in the framework. This immediate interactivity that most strongly surfaces in the monochrome paintings, also of Reinhardt, is contrasted with his dictum of “art as art”. Ultimate success in not only granting raw material its independence, but in insisting on conserving its modality—Stella trying to keep the paint “as good as it was in the can”—would create an art-object that simulated complete independence from the human will that created it. Stella objected to viewers “who . . . retain the old values in painting . . . If you pin them down, they always end up asserting that there is something there beside the paint on the canvas” (Battcock, 1968, 157 f.).

Consequently, some minimalists tried to eliminate the viewer from their art. If this degree of disconnection to anything human were reached, little value for the viewer could be found. Critic Naomi Spector enthusiastically hailed Mangold for excluding “from his work all such concerns as illusion, image, space, composition, climax, hierarchy of interest, movement, emotional content, painterliness, interest in material or processes, and any sort of association or reference to anything other than the physical painting itself” (Spector, 1974). This perspective was not widely shared and Strickland attributes her interpretation to “the Me Decade, an artistic analogue of *Self* magazine (I have no concern for the city, country, planet, or universe, but I’m looking good)” (Strickland, 2000, 114).

The creation of entirely self-sufficient objects without a relationship to a bigger whole would deny any possibility of interaction. Only few minimalists have tried to thus dominate the viewer; perhaps fortunately, Serra was unable to realize his statement about public places: “One has to consider the traffic flow, but not necessarily worry about the indigenous community, and get caught up in the politics of the site. There are a lot of ways one could complicate the problem for oneself. I’m not going to concern myself with what ‘they’ consider to be adequate, appropriate solutions” (Serra and Weyergraf-Serra, 1980, 63). After he had installed his metal Tilted Arc in 1981 (Fig. 2.13), the public



Fig. 2.13 Richard Serra:
Tilted Arc (1981) on the
Federal Plaza in New York.
© VG Bild + Kunst, Bonn
2008

reaction was such that he was “perforce very much concerned with such issues . . . he had blocked the view and escape of residents and employees on his sites. This time it backfired: the work was dismantled beginning March 15, 1989 after extensive and controversial public hearings” (Strickland, 2000, 290; comp. also Friedman, 1995; Senie, 2002).

Although some artists either ignored the audience or tried to exactly define the nature of perception for their art, most minimalist artists actively involved the context, and the viewer in the interpretation of their artworks. Elayne Varian (1967) introduced a minimalist show highlighting the relationship of viewer and object: “The purpose of this exhibition is to show the attitude of

contemporary sculptors to scale and enspheric space ... It is possible to have positive (enclosure) and negative (exclusion) attitudes to define space, ... equally important [is] their approach to the surrounding space, the negative space”. And critic Richard Wollheim (1965) notes that especially in the reductionist artworks “the canvas, the bit of stone or bronze, some particular sheet of paper scored like this or that” concentrates attention upon individual bits of the world.

Minimalist artists focused on a constructive stance in the interaction of viewer and art work; they were not interested in artfulness, and consequently they disliked artful analyses of their works. What was more important was the immediate effect of a work: “One could stand in front of any Abstract-Expressionist work for a long time, and walk back and forth, and inspect ... all the painterly brushwork for hours. ... I wouldn’t ask anyone to do that in front of my paintings. To go further, I would like to prohibit them from doing that ... If you have some feeling about either color or direction or line or something, I think you can state it. You don’t have to knead the material and grind it up. That seems destructive to me; it makes me very nervous. I want to find an attitude basically constructive rather than destructive” (Glaser, 1966, 159).

2.2 Minimalism in Music

As the term minimalism was first used to describe painting, adoption is part of the character of all subsequent uses. Bernard (1993) describes how critics who argue that the term may hardly apply to music, who dispute “the extreme reduction of the musical means is important enough to function as a fundamental characteristic of this music” (Mertens, 1983, 11–12), oversee that the term *minimal*—as the last part tried to illustrate—goes beyond mere reduction in meaning. It has also been quite successful, as other labels, such as “phase-shifting”, “repetitive”, “systemic”, or “process” music, are no longer used to refer to what is now known as *minimal music*. Manifold connections of painters and musicians can be observed in the New York art scene in the 1960s. The earliest performances of minimal music took place in art galleries and individual figures collaborated over extended periods of time: Philip Glass with Richard Serra, or La Monte Young with Robert Morris, to name just a few. Bernard notes that “It is interesting that no one seems to have thought to apply the term *minimal* to this music, at least in print, before Michael Nyman did it sometime in the early 1970s” (Bernard, 1993, 87).

In the following sections, the “minimalist” in minimal music is retraced to use the many similarities with minimal art and some of the differences that emerged as minimal music took a more independent path to add and differentiate the previously detailed meanings of minimalism.

2.2.1 *The Origins of Minimal Music*

I have spent many pleasant hours in the woods conducting performances of my silent piece. . . for an audience of myself, since they were much longer than the popular length which I have published. At one performance. . . the second movement was extremely dramatic, beginning with the sounds of a buck and a doe leaping up to within ten feet of my rocky podium.

— John Cage, *Silence: Lectures and Writings*

After studying classical avant-garde with Arnold Schönberg in Los Angeles in 1934, John Cage became one of the main protagonists of “Concept Music”, a style of music where the composition dominated the performance. He conceived of pieces where tossing coins determined musical events (*Music of Changes*, 1951), wrote for 12 radios (*Imaginary Landscape no.4*, 1951) and composed what was seen by some as “the prototype, the primordial piece of Minimalist conceptual art” (Rockwell, 1986), a piece called *4'33"* (1952) where the performer is directed to do nothing at all for that length of time. Strickland suggests that this piece was inspired by Rauschenberg’s all-whites and represents the “conceptual ne plus ultra for radical reductivism” (2000, 30).

Concept music, with the Fluxus group being the most important source, is often considered as the predecessor of minimal music; Nyman describes that the Fluxus composers “reviewed multiplicity, found its deficiencies, and chose to reduce their focus of attention to singularity” (1972, 119). Yet, concept music often seems to border on arbitrariness—the limits composers set to chance are few (Bernard, 1993, 95), and it is difficult to decide whether only irony, or a serious intention (as is assumed in minimalist art) drives its principals. This question of control marks the differences between concept music (that widened the definition of what can be considered music) and early minimal music, which implemented “formal control” of chance elements (Gena, 1981).

Cage (1991) hints at nihilist Dada as a source of inspiration. This emphasis on the illogical and absurd, the creative techniques of accident and chance demonstrates the difference between Cage and some of the early pieces of La Monte Young and what later developed into minimalism. Bernard (1993,96) points out that—like Minimalist artists (e.g. Morris, Flavin, or LeWitt) deal with temporality using Serialism, or a gradual or systematic progress through a series of possibilities—Minimalist composers emphasize the passage of time by “*composing out*” the possibilities of their material *in a transparent manner*. Minimalism is thus marked by a conscious and transparent form of reduction that uses omission as an explicit element to target attention.

Perhaps even more important for the minimalist composers themselves, minimalism in music is both a counter-reaction and a derivation of the avant-garde style of Serialism (Potter, 2000, 20), and can also be understood in political, rather than aesthetic terms. Serialism had long been the predominant form of “new classical” music, dictating what defined good music, and even

determining which techniques to employ when composing; it had become very difficult to think of a new form of music as the atonal revolution of “old” classical harmonics and structural principles had created new, equally restrictive rules. Minimalism established a radically different alternative both to the “old” and “new” classical music. For David Lang, minimalism “was a historic reaction to a sort of music which had a strangle hold on . . . American musical institutions, and which none of us really liked. . . . What most people really hated was the way that this other world had theorized that it was the only music possible . . . I look at Minimalism . . . as being just the battleground that was necessary to remove those forces from power: not to obliterate them or destroy them, but . . . to loosen up the power structure in America. And I think that [one reason why] Glass’s music and Reich’s music came out so severe, and so pared down, was that . . . it was a polemical slap in the face . . . That battle’s been fought . . . My job is to sift among the ashes and rebuild something” (Lang quoted *ibid.*).

The suggested lineage of minimalism includes also some more distant predecessors, yet in Richard Wagner’s *Das Rheingold* (1854), the simplicity of long chords in the opening bars rather amounts to anticipation of the complex, virtuous tapestry that follows, Eric Satie’s *Vexations* (1963) simply employs repetition without any development as an artistic means and the sometimes-mentioned *Bolero* by Maurice Ravel (1928) might be repetitious, yet the “Romanticism of the piece is the antithesis of austere Minimalism” (Strickland, 2000, 124) and its directionality in dynamics and rhythm is unidirectional.

Concentrating on the four musical figures most prominently identified as “Musical Minimalists”, Terry Riley, La Monte Young and Philipp Glass are introduced in some detail in the following sections. For a more thorough and balanced account of their lives and works, I must refer the reader to Potter’s excellent “Four musical minimalists” (Potter, 2000) and, for a different perspective, to Strickland’s analysis of the origins of minimalism (Strickland, 2000). For a contemporary perspective, the collected articles of Tom Johnson are a worthwhile read (Johnson, 1991).

2.2.2 Terry Riley

Terry Riley was the minimalist composer with most connections to Cage’s concept music, having practiced that style during his early career. Together with Young, however, he began to conceive a new style that would eventually turn into minimalism. A strong European influence, both from his studies and from living in France, links his works to Serialism. Strickland (2000, 133) highlights Riley’s “two major contributions to early Minimalism: the reintroduction of tonality” and “the use of repeating musical modules”. The former is first introduced in his 1960 *String Quartet*, where he returned to tonality, which had been absent from his earlier works, in long tone composition—fairly unusually long tones, for that matter. The latter became evident in his 1961

String Trio: “the unvaried repetition of tonal phrases marked a radical compositional simplification” (ibid., 143). Composing the Trio, his interest in Serialism remained visible—he had studied Stockhausen with Wendall Otey and Robert Erickson at San Francisco (ibid., 133), but tonal repetition became musically dominant, while chromaticism moved to the background; for Riley, “That was the transitional piece” (Strickland, 1991, 112).

Yet, his most important contribution to minimalism was *In C*, fifty-three “modules”, supposedly written in one night (all patterns are shown in Fig. 2.14); *In C* is scored for “[a]ny number of any kind of instruments” (Potter, 2000, 112).



Fig. 2.14 Terry Riley: *In C* (1964), the first 10 of 55 patterns. With kind permission of Terry Riley

Its “ensemble can be aided” by a pulse that can be performed “on the high c’s of the piano or on a small mallet instrument” (ibid.). Not all performers need to play all the modules; some are better suited to melodic instruments, such as wind instruments, while the faster patterns are fitting to be played by keyboard instruments. The piece starts with a pulse, synchronizing all performers; after that, each musician may start with module one in his/her own time, repeating as often as he/she wishes before moving on to the next module. Although in some performances, this has resulted in “a kind of glorious, hippie free-for-all” (ibid.) performances produced in cooperation with Riley “generally deployed a maximum of four modules at any time and thus encouraged the performers to work more closely together” (ibid.); in Riley’s words, “no performer should draw attention to his own part at the expense of others, this would ‘collapse the structure of the piece’” (ibid.).

By using repetition and relying on skillful improvisation, the score of *In C* fits onto a single page, and with written instructions is still shorter than three pages, although performances “normally average between 45 minutes and an hour and a half” (Riley, 1964). The resulting patterns are different in every performance, yet the overall impression is not completely different—one can recognize *In C*. This balance between freedom for the performers and careful composition for possibilities that are limited by cues rather than rules: Riley states “as the performance progresses, performers should stay within 2 or 3 patterns of each other. It is important not to race too far ahead or to lag too far behind” (ibid.). Also, a strict sense of rhythm is demanded for by Riley, to prevent an impression of disorder.

Repetition had been discovered long before by Riley: when he had worked at the San Francisco Tape Music center, he experimented with an echo effect to put a piece of Ramon Sender on a “sonic ‘acid trip’” (Strickland, 2000, 148). Later, working in Paris, where he played jazz and ragtime in Pigalle, he composed *Mescaline Mix*, a piece elaborating this echo effect. After continuing playing lounge piano in officers’ clubs and bars at American bases, he met a French engineer who “ended up hooking two tape-recorders together” (Strickland, 1991, 112). The tape ran along the record head of the first recorder and the play head of the second recorder, who thus played what had been recorded before, feeding the output back to the first recorder. Effectively, this resulted in a progressively complex structure as the recording was overlaid on itself. What might seem trivial today in an age of sampling was a revolution then, and for Riley a revelation that he was still enthusiastic about 25 years later (Strickland, 2000, 149).

2.2.3 *La Monte Young*

The music Terry Riley was using for his first tape experiments, *The Gift*, was the piece *So What* from *Kind of Blue*, one of the best-known jazz albums of all time, recorded in 1959 by Miles Davis, who pioneered modal jazz. The scarcity of melodic shifts—*So What* contained only two modes in thirty-two bars—allowed Riley to use repetition without immediately creating disharmonies. Jazz can be seen as one of the major influences on minimal music. Riley, La Monte Young and Steve Reich all played in jazz groups in their teens, and Coltrane, who continued to explore exotic modes “from Morocco to Afghanistan” (ibid., 150), made popular the soprano saxophone that Young adopted for his latest work period, where he turned to drone sounds.

In his early years, Young took up “the indeterminacy practiced by [John] Cage and his followers” (ibid., 144) in his “concept art” composition of April 1960, *Arabic numeral (any integer) to Henry Flint*: the Arabic number indicated the number of times a sound was to be repeated, with both the choice of number and sound left to the performer. Cage himself found the piece “relevatory” (Cage, 1961, 52). In an extended realization of repetition, Young composed *1698* in 1961, the title designating the number of times the same dissonant chord needed to be played on a piano—sometimes, Young was reportedly playing the piano until his fingers bled (Strickland, 2000, 145).

Young thus presented himself as uncompromisingly obsessed with repeating sounds—according to Potter (2000, 43, 12), he was “wildly interested in repetition, because [he thinks] it demonstrates control”. His *Composition 1961* with 29 identical instructions to draw a straight line and follow it represent another form of repetition. Young’s repetition differed from the repetition used by Riley in his “still traditional, if highly experimental, score[s] primarily by means of notated and repeated musical phrases” (Strickland, 2000, 145) and has often

been connected to a continuity derived from repeated repetitions: Smith (Smith, 1977, 4) notes that “witnessing a single activity extended in time, we begin to appreciate aspects and ideas that would otherwise remain hidden”, and Mertens judges: “the term repetition, however, can hardly be used for La Monte Young’s music since in this case the principle of continuity is decisive” (Mertens, 1983, 16).

What was later termed *additive processes* was—in a simple form—also pioneered by Young, who wrote *Death Chant* for the funeral of an acquaintance’s child. To a minimal motive of two notes, a single note is added for every repetition; the resulting piece thus, although repetitive, demonstrates the slow progression of time (Fig. 2.15).

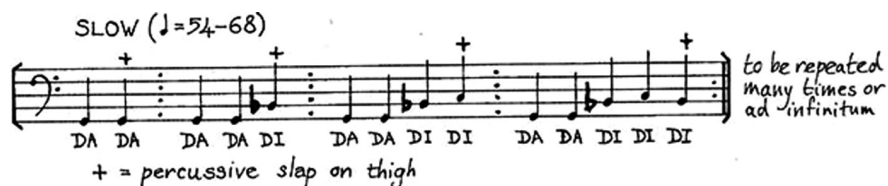


Fig. 2.15 La Monte Young: *Death Chant* (1961)

John Coltrane, who “used to construct modes or sets of fixed frequencies upon which he performed endlessly beautiful permutations” (Young and Zazeela, 1969), influenced Young to begin playing the saxophone, and partly by that instrument, a new composition phase was introduced: As in the 1964 *Sunday Morning Blues*, rapid five-second bursts of notes on Young’s soprano saxophone were contrasted with voice, guitar and viola drone sounds that were held continuously through the performance (Fig. 2.16).



Fig. 2.16 La Monte Young: *Sunday Morning Blues* (1964), excerpt

As Young himself notes (Young, 2001, Notes on Composition 1960 #7), the “use of sustenance became one of the basic principles of my work. When there are long sustained tones, it is possible to better isolate and listen to the harmonics.” This principle has been perfected and applied in Young’s best-known piece, the 1958 *Trio for Strings*, “which, while constructed as a serial piece, has

itches of longer duration and greater emphasis on harmony to the exclusion of almost any semblance of what had been generally known as melody” (Young, 2001, Notes on Composition 1960 #7). The Trio takes serial notions such as symmetrical row construction and static tonal surface to an extreme conclusion, and is comprised only of long sustained tones in varying alignments alternating with silences (Fig. 2.17).

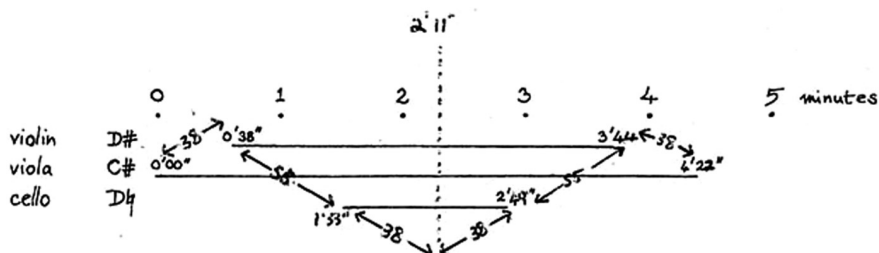


Fig. 2.17 La Monte Young: Trio for Strings (1958)

The use of long-held tones eventually led Young to the development of his “concept of the drone-state-of-mind” (Young, 2001, Notes on Composition 1960 #7); behind the use of sustained drone sounds stands the belief that “tuning is a function of time”(ibid.), and that “frequency environments” influence the nervous system, eventually “establishing periodic patterns” (Young, 2001, Notes on Composition 1960 #7). Young later became a disciple of the Pakistan (then-Indian) Raga singer, Pandit Pran Nath whom he admired for his ability to perfectly hit and sustain pitch (Strickland, 2000, 172f).

2.2.4 Philip Glass

Philipp Glass’ interest in reduction developed under the influence of Samuel Beckett (Potter, 2000, 255): during his Paris studies, he created his first theater piece together with JoAnne Akalaitis. This play was later described by Glass as “a piece of music based on two lines, each played by a soprano saxophone, having only two notes so that each line represented an alternating, pulsing interval. When combined, these two intervals (they were written in two different repeating rhythms) formed a shifting pattern of sounds that stayed within the four pitches of the two intervals. The result was a very static piece that was still full of rhythmic variety” (quoted ibid., 256).

A second important source of inspiration was Indian classic music (ibid. 257ff), whose rhythmic qualities fascinated him: he felt that in contrast with the western “divisive” rhythm that divided a musical score in bars, and these again in beats, Indian (and other non-western) music created rhythms using additive

methods (ibid., 270f). These influences lead him directly to his contribution to minimalist music, additive music became the “structural essence” (ibid., 284) of his musical work.

I + I (1968), a piece for one player and amplified tabletop, is often taken as the initial milestone in Philip Glass’ development. It is the earliest and most rigorous example of the composer’s use of what he termed an “additive process”. *I + I* is only concerned with rhythm: the player taps on a tabletop amplified via a contact microphone, two basic “rhythmic units” are offered and amended by suggestions how to use them as “building blocks” for a performance. The “additive process” is specified simply by instructing the player to combine the “two units in continuous, regular, arithmetic progressions”; the first of Glass’ examples comes out as “1 + 2; 1 + 2 + 2; 1 + 2 + 2 + 2; 1 + 2 + 2; 1 + 2 etc.”: the first unit is contained only once in each alteration while the second unit expands and contracts symmetrically.

This “additive process” served Glass as the main technique for structuring his compositions for some ten years from thereon. He remarked, “It’s funny, it’s such a simple idea, but believe it or not, I just hadn’t thought of it then. Actually, it was the result of a year or two years’ work: I looked back and thought of simplifying all the processes I had used into that one idea” (quoted in Potter and Smith, 1976).

Although Glass had previously applied similar techniques to sequences in his music, *I + I* is the first work that rigorously regimented the technique, applying systematic rules for expansion and contraction and thus making the unfolding structure clearly audible, transparent. As with Reich’s works using phasing, “the compositional process and the sounding music become one” (Potter, 2000, 272).

Glass invented additive processes. They are no cyclic structures and they differ from the repetition that La Monte Young developed from working with tape interference: Glass additive processes follow strict rules, yet they describe a dynamic movement. The rules for creating structure are formalized, and can be perceived by the listener as such, yet the possibilities for combination allow the weaving of complex musical patterns. This also goes far beyond the inspiration that Glass found in Indian music: “The kind of additive processes which Glass made the basis of his own music are not, however, to be found in Indian practice; even the rigorous application of these is not a direct borrowing but an extrapolation of the composer’s own from the Indian approach to rhythm.” (ibid. 273).

Philip Glass continued to build more and more complex musical pieces on the principle of additive processes. He experimented with parallel movements in *Music in Fifths* (1969) and *Music in Similar Motion* (1969) and with tonal inversion in *Music in Contrary Motion* (1969) (ibid. 292–300). While the latter was written in “open form”—never ending, the piece just stops without reason, he later turned away from such playful experiments and sought to develop additive processes further. In what is considered his masterpiece, *Music in Twelve Parts* (1971–1974), construction rules guide not only rhythm, but also structure:

the composition was first played in 1971—and later turned into the first of twelve parts that followed a regular development (ibid., 312f).

2.2.5 Steve Reich

Steve Reich has become the most successful of the minimalist composers in commercial terms and as his later works are much more compatible with public taste, it has been forgotten that he was among the most rigorous minimalists. Brought up with “classical” music—his mother became best known as the Broadway singer June Carroll—his interest quickly turned to both older and more modern music: “It wasn’t until the age of 15 that I heard the music that would end up motivating me to become a composer and informing what I did: that was jazz, bach and Stravinsky . . .” (quoted in Smith and Smith, 1994, 212). Reich majored in philosophy at Cornell University, and studied subsequently privately with Hall Overton in New York before attending Juillard School between 1958 and 1961—at which time he met fellow student Phillip Glass (Potter, 2000, 155). “Running away from home” (Reich quoted ibid., 156), he arrived in San Francisco where he composed *Music for String Orchestra* (1961), a twelve-note set that was to be repeated ad infinitum, and *Four Pieces* (1963), “twelve-tone jazz licks trying to become tonal” (Reich quoted ibid., 159).

Starting with *Four Pieces*, Reich felt “despite my limitations as a performer I had to play in all my compositions”—a decision whose practical consequences helped him towards a simpler, reductive style (ibid.). Meeting Terry Riley in 1964 and assisting the development of *In C* (ibid., 111–116), he was “pointed the way towards a more organized and consistent kind of pattern-making with highly reductive means” (ibid., 164). With *It’s Gonna Rain* (1965; Fig. 2.18), Reich sought to reproduce the perfect synchronization of tape loops, using a Black American English sermon of Brother Walter; the first movement using only the words “it’s gonna rain”, the second drawing on a longer passage. However, technical imperfection of the Wollensak tape recorders he used let the two recordings fall out of synch, with one tape gradually falling ahead or behind the other due to minute differences in the machines and playback speed. Reich decided to exploit this *phase shifting* to explore all possible recursive harmonies.

When Reich returned to New York in 1965, he came into contact with minimal artists like Robert Rauschenberg, Sol Le Witt, and Richard Serra.



Fig. 2.18 Steve Reich: *It's Gonna Rain* (1965)—basic unit. (c) 1987 Hendon Music, Inc

Although he “was derisive about the term ‘minimalist’” (Reich quoted *ibid.*, 171), he acknowledged “there certainly was an attitude” (*ibid.*) he shared with the painters and sculptors; he was also financially supported by the already-established Le Witt and Serra as they purchased his original scores. He slowly built up an ensemble that became the center of his compositional activities. The life performance in “painstaking rehearsals” provided the basis for the development of compositions like *Drumming* (1970–71) as they allowed for “many small compositional changes while the work is in progress and at the same time [building] a kind of ensemble solidarity that makes playing together a joy” (*ibid.*, 198). The composition was now only part of the musical product, and the performance and interpretation gained an important role.

This development culminated in *Music for Eighteen Musicians* (1976; Fig. 2.19): rehearsals for this piece were held over a period of two years and “structurally, the work is so complex that no attempt was made to notate repeats or achieve synchronisation in what was written down” (*ibid.*, 199). The first complete score was published only in 1996, and consisted of a transcription of a 1973 recording. *Music for Eighteen Musicians* became Reich’s most well-known piece and is valued for its “significant expressive extension of the composer’s musical language” (*ibid.*, 231). Reich still uses the development of patterns and rhythmical shifting as techniques, but combines them more subtly, for the first time exploring the technique of “underpinning a repeated melodic pattern by rhythmically shifting chord changes” (*ibid.*, 233).

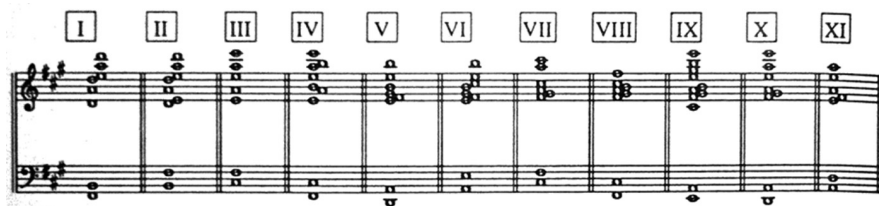


Fig. 2.19 Steve Reich: *Music for 18 Musicians* (1978)—cycle of chords. (c) 1978, 1998 Hendon Music, Inc. Printed with kind permission of Boosey & Hawkes Bote & Bock, Berlin

Reich gradually developed his interests “from ‘structure’ as such to a greater concern with sound” (*ibid.*, 211). In *Drumming*, he introduced a rich variety of instruments—e.g. marimbas and glockenspiels, and combined them with voices (*ibid.*, 212–225). This more symphonic style influenced his later works, although he sometimes returned to a more minimal instrumentation, e.g., in the 1972 *Clapping Music* that was written for the pairs of hands of two performers. Although the choice of ensemble was minimal, *Clapping Music* was still a highly complex piece, its basic unit throwing the 12/8 meter in doubt as notes follow on the 5th, 8th and 10th quaver. The resulting rhythm can be interpreted “in a number of ways; when performed in canon, the choice of downbeats is naturally

increased” (ibid., 225). Listening to the piece, it can even be difficult to discern that both players clap the same pattern.

A significant portion of Steve Reich’s reputation has been made in the world of pop music, where Brian Eno and Mike Oldfield popularized music influenced by Reich and other minimalists. Reich’s influences in pop music can be retraced even in today’s music. In 1999, *Reich: Remixed* was produced, with several leading “techno” artists, including Coldcut, Ken Ishii and DJ Spooky, reinterpreting the composer’s music from 35 years.

2.2.6 *Summarizing Minimalism in Music*

Reviewing the contributions of the four musical minimalists to minimal music, similarities with minimal art are obvious: a reduction in means can be seen in the sparse orchestration of many pieces. Cageian influences lead also to some experiments with the reduction of meaning, yet as a whole, musical minimalism is less playful than its counterpart in art. The main focus of minimal music is on the reduction of structure and sound—often by employing repetition and through combination of simple patterns.

Distancing himself from Serialism, Riley reintroduced tonality to modern music and pioneered the use of repeating musical modules. La Monte Young started his composing career with tape experiments, slowly escaping the Cageian influence. His mature minimalist works experiment with repeating sounds, introduce rhythmic addition and make use of drone sounds to create powerful soundscapes. Philipp Glass was interested in structure and rhythm from his first works under the influence of Beckett, and later perfected structural transparency in his works by inventing additive processes that combine simple patterns using composed rules. This allows both the interpretation to *create* music based on the composition, and the listener to reconstruct the act of creation. Steve Reich also used reductive patterns and tape loops in his works, but later shifted his focus of attention from structural qualities of his work towards the creation of a sound. He built up an ensemble that was crucial in maturing his compositions—the interpretation was given an important role in the making of his music.

Another important aspect of minimal music is the involvement of the listener—as minimalist art focused on the necessity for the viewer to “complete the work”, the same can be said for performances of minimal music. Brian Ferneyhough noted that “All music is many-layered . . . Our ears impose on us, with any listening process, a number of possible strategies which we’re constantly scanning and assessing and . . . finding a new distance or new perspective in relation to what we’re hearing at that particular moment. It’s one of the few possible justifications for minimalist music, for instance: that the maximalisation comes through the individual, rather than through the object” (Brian Ferneyhough, in conversation with David Osmond-Smith during the interval

of a recording for BBC Radio Three, first broadcast on 18 July 1993, quoted *ibid.*, 14f).

The influence of minimalism extends to current pop music, as elements of minimalism were introduced into pop, and even muzak by Brian Eno and Reich himself; a generation of artists that are now creating electronic music have been influenced by the minimalisms. Modern interpretations of minimalism, however, are more easy to listen to and tend to view the original minimalist compositions as refreshingly extreme, visible e.g., in the enthusiasm of Björk who celebrates minimalism's ability to "shake off that armour of the brain" (Björk quoted *ibid.*, 46)

2.3 Minimalism Found Elsewhere

As this chapter aims to provide an overview of the broad range of historical definitions of minimalism, it cannot be withheld from the reader that the term "minimalism" has not been confined to art and music: it has since found wide application in diverse areas, starting with typography, architecture and literature and reaching as far as food or politics.

However, while some of these uses enrich the definition of minimalism, other applications of the term are motivated by rather superficial aesthetic similarities: using few and fresh ingredients for cooking (Katzen, 2006), or linking the minimal amount of food in French Cuisine to minimalism helps little to further explain the term. Even more serious uses of the term are often only using the concepts transported by minimalism, and not adding to them, e.g. in the minimalist conception of state (Nozick, 1974) that starts with the state-of-nature of the individual and goes little beyond reducing the state to interfere as little as possible (Böhr, 1985, 5 + 121f).

A focus on the original meaning motivated the following, necessarily small, selection of "minimalisms": literature and architecture illustrate the meaning of space, and typography adds the conflict between form and function that we will return to when discussing minimal design (compare Section 4.1).

2.3.1 *Literary Minimalism: Roots in Hemingway, Archetype in Carver*

The world is so complicated, tangled, and overloaded that to see into it with any clarity, you must prune and prune.

—Italo Calvino, *If on a Winter's Night A Traveller*

While "Minimalism" in the visual arts tried to avoid any implications beyond the object itself, for literature, the opposite could be claimed: within a minimal frame, the evocation of larger, unnamed issues is often effectuated by figurative associations. Stella's "What you see is what you see" is contrasted with

Hemingway's "tip of the iceberg" aesthetic principle, by which he suggests that seven-eighths of the story lies beneath its surface. On the other hand, Minimal art in the post-modern tradition often requires the viewer for completion, and thus shares with Minimal literature an interactive character, the strong involvement of the viewer that John Perreault described as: "The term 'minimal' seems to imply that what is minimal in Minimal art is the art. This is far from the case. There is nothing minimal about the 'art' (craft, inspiration or aesthetic stimulation) in Minimal art. If anything, in the best works being done, it is maximal. What is minimal about Minimal art . . . is the means, not the ends" (Perreault, 1967, 30).

As the art in Minimal art is rooted in the very difficulty of extreme reduction, the apparent simplicity of literary minimalism, with its stark prose and tacit narration, established a highly stylized language. Reflection and implication are used as means to express the unstated. This conscious, careful use of language was described by author Amy Hempel: "A lot of times what's not reported in your work is more important than what actually appears on the page". Minimalist short stories in particular often take working class reality (blue collar stories) as a subject; at first glance, only everyday activities are described—yet although the text resembles reality, the presentation suggests that there is more to the text than the narrated details. As Cynthia W. Hallett notes, "Minimalist writers . . . employ an aesthetic of exclusion—a prudent reduction of complex equations, a factoring-out of the extraneous until the complicated is expressed in the simplest of terms. Generally in these texts, distraction and clutter are stripped from human commerce until the reader encounters the whole of society reflected in slivers of individual experience, the unstated present as a cogent force" (Hallett, 2000, 7).

Although scholars disagree about the value of covering different authors "in the same breath" for fear of watering the term (Trussler, 1994), literary minimalism has been traced back to the prose poem developed by Baudelaire and Russian poets such as Ivan Turgenev, Fedor Sologub and Daniil Kharmis, who created an aesthetically stark language with symbolist, futurist and absurdist miniatures (Wanner, 2003). In American literature, minimalism owes much to the clean and spare literary style of Ernest Hemingway, but Edgar Allan Poe, Anton Chekhov and James Joyce are included as strong influences on the Minimalist style (Hallett, 2000, 12). Edgar Allan Poe's notions of "unity" and "singleness of effect" are both achieved through exclusion: "In the whole composition, there should be no word written, of which the tendency . . . is not to the one pre-established design . . . Undue length is . . . to be avoided" (Poe, 1842). As selective inclusion is achieved primarily through conscious exclusion, secondly through omission of excess, an inner unity is achieved that delivers the "certain unique or single effect to be wrought out" (*ibid.*, 950). Although he rejected rationality in the tradition of Romanticism, his calculated composition of emotions is a fine example for a rational, artificial process that "combines such events as may best aid . . . in establishing this preconceived effect" (*ibid.*, 950).

Chekhov continued the exploration of the singular effect using “a plotless design that focuses on a single experience . . . [and] an objective presentation which so distances the narrative voice that the reader is drawn into closer association with the story” (Hallett, 2000, 31), the latter a typical treat of Minimalist fiction. Joyce—at least in his early works—established a minimal dependence on the traditional notion of plot, his use of seemingly static episodes and “slices of reality” is also part of the Minimalist style (*ibid.*, 12). Samuel Beckett and his efforts “to present the ultimate distillation of his inimitable world-view . . . to compress and edulcorate [purify] traditional genres” (Hutchings, 1986) have also influenced not only Minimalist writers (comp. Glass), yet the major contribution to the Minimalist style could be the “concept of language as an inadequate tool for communication, especially for conveying emotion, subjective concepts and intangible matters”, later a “major element of the minimalist writer’s sensibility” (Hallett, 2000, 35).

In the late 1960s and early 1970s, a new generation of authors including Ann Beattie, Frederick Barthelme, Raymond Carver, Amy Hempel, and Mary Robison rediscovered “simplicity and immediacy of fictional expression” (*ibid.*, 10) for themselves and initiated a shift from “well-made” literature to a “growing concern with character and sensibility, with the inner dynamics of the landscape of individual psychology . . . related to the historical shift from moral absolutism to moral relativism as the dominant sensibility in our culture” (Weaver quoted *ibid.*, 126). The forms that minimalism takes in literature are as diverse as its authors: Barth notes that in Literature, minimalism can be of “unit, form and scale”, of “style . . . vocabulary”, or of “material” (Barth, 1986).

The final meaning of a Minimalist story unfolds only within the personal context of the reader—as “simple” facts are interpreted, “metonymic matter is transformed into metaphoric signifiers” (Hallett, 2000, 11). Strong psychological, social and historical associations are generated by the indirection and understatement of the deceptively simple, figurative language of minimalist prose. What appears to be a single event or a depiction of “nothing happening” signifies human condition or capacity—a connection between the trivial and the significant is created. Also, what is omitted becomes prominent; often, the inner state of personas is communicated without speaking the exact words, but rather relying upon “ready phrases, expected responses . . . or euphemism to say it any other way but outright” (*ibid.*, 19). Just as one could claim that nothing exists unless it has a name, by alluding to the exact definition of inner feelings and motivations, they “keep their innocence”, or with Sartre: “To speak is to act, and everything we name loses its innocence, becoming part of the world we live in” (Sartre, 1965).

Minimalist writers do not try to achieve closure within the narrative, but rather compose story elements for final assembly by the reader.² Thus, the

² If most of this sounded a bit heady for your taste, you could go to <http://garfieldminusgarfield.net> to experience some of the complexity created by reduction. And even if not, it is probably worth a look.

sentences, the ending as much as the first lines often seem disconnected, the works are “but shells of story, fragile containers of compressed meaning” (Hallett, 2000, 11). This results in an unusual open-endedness of most of the short stories and in a rejection of linear plots; even more, this illusion of a “storyless” story often goes along with a seemingly “authorless” story, as the reader seems to overhear a conversation, or eavesdrop on an event, rather than being told a story: the “suppression of the artist’s personality can be virtually total . . . [the abnegation of individual style is so complete that . . . we cannot tell one writer’s work from another’s; yet the very suppression of style is a style – an aesthetic choice, an expression of emotion” (Gardner, 1991, 36).

The label minimalism also implied some negative meaning in literature, some critics drew a curtain between prose poetry as an art and short fiction as a mere craft that did not allow them to appreciate the carefully crafted language of Minimal fiction. Jerome Klinkowitz was convinced that minimalist writers did not dare to judge human behavior and lost the “artfulness” of storytelling in their oversimplified descriptions, that Minimalist fiction “suspends all aesthetic innovation in favor of parsing out the most mundane concerns of superficial life (for fear of intruding with a humanly judgmental use of imagination)” (Klinkowitz, 1993, 364). Sven Birkerts was dissatisfied with the lack of resolution and asked for fiction “to venture something greater than a passive reflection of fragmentation and unease” (Birkerts, 1986, 33).

Barthelme gave the following advice to those “convicted” of minimalism, again highlighting the importance of the reader, and the virtue of being open for interpretation: “Tell them that you prefer to think you’re leaving room for the readers, at least for the ones who like to use their imaginations; that you hope those readers hear the whispers, catch the feints and shadows, gather the traces, sense the pressures, and that meanwhile the prose tricks them into the drama, and the drama breaks their hearts” (Barthelme, 1988, 27).

2.3.2 Minimalism in Architecture

Minimalism has also been used to describe the architecture of human dwellings. In this discipline, a fairly clear line can be drawn between those who favor a “minimalist look” because of its clear lines and impressive shapes, and those who focus on a minimal visibility of architecture for its users. As perhaps the most prominent representative of the former approach, Ludwig Mies van der Rohe adopted the motto “less is more”; for him, this meant flattening and emphasizing the building’s frame, eliminating interior walls and adopting an open plan (cf. Schulze, 1986). Thus, he aimed to reduce the structure to a strong, transparent, elegant skin—he termed this “skin and bones” architecture.

The clear forms of minimalism in architecture were interpreted as a reaction to the attention-calling visual excess of the supermarket culture. Minimalism is still a label that is broadly used for current industrial and civil architecture. The

use of the label itself is seldom discussed, and in contrast to other disciplines, definitions are given using a multitude of examples rather than a formal explanation (Cuito, 2002a, b; Petterson, 2003, 2004; Castillo, 2004). Minimalism is also used as a term to describe the outer surroundings of buildings, gardens (Levy, 1996; Bradley-Hole, 1999) and public spaces (Cuito, 2001), and interior design (O'Bryan, 2002; Rossell, 2005).

Architecture tends to shy away from standardization almost as much as art. Combining the clear lines of minimalism with great visual variation, maximalism evolved in turn as a reaction to minimalism in architecture (compare Fig. 2.20). This counter-reaction was based on a rejection of the total reduction of forms and colors that threatened to create a sterile environment. In *Learning from Las Vegas*, Venturi et al., (1972) argued that within the visual chaos of Las Vegas, signs are not any longer only decoration but acquire a central function in architecture. He criticizes minimalism succinctly: "Less is not more. Less is a bore." (ibid.).



Fig. 2.20 Will Alsop: Peckham Library (1999), a maximalist design, private photograph

Although these new decorative elements have strongly influenced modern architecture, minimal architecture has not gone out of fashion. Yet, as architects Pawson and de Moura argue, it has gone beyond the simple geometrical forms and moves "towards concrete attempts, albeit thinly scattered over time and space and in modest quantities, to introduce a life more imbued with spirituality, clarity and harmony" (quoted in Bertoni, 2002, 149ff). This tendency towards integration of existing spaces is often marked by the integration of existing architecture.

As architect John Pawson notes, in minimal architecture, “Emptiness allows us to see space as it is, to see architecture as it is, preventing it from being corrupted, or hidden, by the incidental debris of paraphernalia of everyday life” (quoted *ibid.*, 134ff). Architect Michael Gabellini adds: “Many people think that Minimalist art or architecture is something cold, abstract and sterile. Instead, minimalism is not only art or architecture, actually it is an idea that does not elude existence. It is analogous to the editing of a film, where there is an inherent concentration of form and experience. More than a subtraction, Minimalism is an inherent concentration of experience and pleasure” (quoted *ibid.*, 183ff). Franco Bertoni highlights the contribution of minimalism to the discipline, namely a heightened awareness for space: “Leaving aside present-day misuse and the inflation of the term, Minimalist architecture represents one of the most significant contributions to a review of a discipline, and an attempt to endow it with new foundations, and a way of life” (*ibid.*, front flap).

As in other disciplines, minimalism connotes a collection of works of architects from profoundly different origins and cultural backgrounds; common to most approaches is primarily the rediscovery of the value of empty space, and extreme simplicity. Bertoni further lists “a reduction in expressive media, and a radical elimination of everything that does not coincide with a programme” as characteristics for minimalist architecture, often resulting in “minimalistic design overtones, . . . and formal cleanliness” (*ibid.*, front flap).

2.3.3 *Minimalism in Typography*

Although the use of the notion of minimalism is not agreed upon within typography and terms such as modernist and functionalist typography are often used interchangeably, again, an immediate and a more reflective understanding of minimalism can be observed. The direct translation of “minimal” is exemplified by designer Ron Reason’s claim that minimalism results in better typography: “minimalism in typography translates immediately into cleanliness, orderliness, ease of navigation, and consistency” (Reason, 2001). Here, minimalism is understood as the reduction of means—the use of less typefaces.

In contrast, the more reflective understanding results in the use of less, and less ornamental typefaces and the accented use of whitespace to structure content; its foundations are rooted in the conceptual shift of typography as functional design—following the development in the liberal arts. According to Ferebee (1994, 107), “Two extensions of Cubism—de Stijl and Constructivism—were the primary influence on Functionalist typography and poster design”. The work of de Stijl and Bauhaus typographers was consolidated in Tschichold’s (1928) *The New Typography* (1994, 110).

Jan Tschichold summarizes the intention of his typography in three sentences: “1. The new typography is purposeful. 2. The purpose of all typography is communication. 3. Communication must be made in the shortest, simplest,

most definite way” (quoted in Good and Good, 1995). This striving for functionality has been understood as a reaction to on the one hand the possibilities opened by mass production—much as the minimalist artists *auseinandersetzen* with artificiality and new materials—and on the other hand the increased scale of the consumer market for printed articles. Seeking solutions to communication problems, typographers around Tschichold tried to enhance effective communication. This interpretation is exemplified by Katherine McCoy, historian of graphic design: “Modernism, especially at the Bauhaus, was a response to the economies of scale and standardization in the new mass societies. This functionalist design philosophy of ‘form follows function’ is based on standardized processes, modular systems, industrial materials and a machine aesthetic of minimalist form. Universal design solutions were sought to solve universal needs across cultures” (McCoy, 1995).

Tschichold understood himself as a typographic designer, a profession that did not exist before and that aimed to create graphic designs using typefaces. Previously, typesetters followed the rules of their trade and understood typesetting as a craft that tried to create products that excelled merely in their usability. *The New Typography* has been understood as technical-symbolical formalism, providing rules and examples for creating typographic designs. It is not. As Tschichold notes, “Merely to copy its external shapes would be to create a new formalism as bad as the old. . . . It will come only from a complete reorientation of the role of typography and a realization of its spiritual relationship with other activities” (Tschichold, 1928, 7). And further, “Despite its many illustrations, this is not a copybook. It is intended to stimulate the printer and make him aware of himself and the true nature of his work” (ibid.). Tschichold

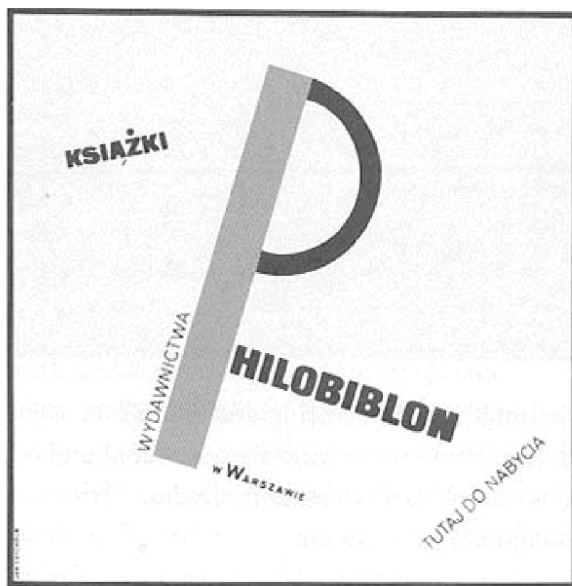


Fig. 2.21 Typographic design by Jan Tschichold (1924), Poster for Philobiblon Press, Warsaw

emphasized the conceptual frame that is the basis for his designs; his minimalism is of more than superficial nature.

A number of influential minimal designs were created by Tschichold in the 1920s and 1930s, and the minimalist font *Grotesk* became popular (Fig. 2.21), yet Tschichold himself returned to the use of ornamentals in his later work period, and also started using serif fonts, creating the Sabon face, a Garamond variant, in 1964. After having to emigrate to Switzerland, he slowly acknowledged the *function of ornamentals* in typography and the benefits of creating a pleasant and less harsh layout (Aynsley, 2001, 68). One could also argue that he never became “playful” (in a negative sense) and always kept true to his sense of functionalism as “serving a communication purpose” (Tschichold, 1928). His work with Penguin Books, for whom he overhauled the typography of their paperback series, is visible to the day.

2.4 Homing in on Minimalism: Summarizing the Art perspective

*If the doors of perception were cleansed,
everything would appear to man as it is, — infinite.*

— William Blake, *The Marriage of Heaven and Hell*

Although this chapter started out contesting the feasibility of a universal definition for minimalism, it attempts to close with a short synopsis of the characteristics that have been subsumed under this label. Although almost every use of the meaning of the term minimalism refers to a unique meaning, some common motives can be identified that appear in several contexts. Among these repeating motives in minimalism are a *minimality of means*, and a *minimality of meaning*, a *minimality of structure*, the repeated *use of patterns* and the focus on *involvement of the recipient*. The following chapter refers to these motives as it redefines minimalism within the context of designing of interactive systems.

Before this chapter concludes with a description of the identified motives, however, a short note on methodology must be allowed. Computer science has a tradition of unscrupulously borrowing from other sciences. In its beginnings, this need arose from the novelty of the subject, and many methods that seemed to prove useful but originated in other disciplines were quickly adopted to form the new core of computer science. This book does not try to integrate or assimilate yet another discipline, instead a more modest aim is followed: minimalism as a concept from the liberal arts is borrowed to illustrate existing practice within computer science. Although computer science tends to prefer simplifications if they generate working models suitable for implementation, this terminological transfer cannot yield engineering rules but rather promises to deliver a critical perspective that helps to find and judge design decisions.

Even if a definition of minimalism existed, the transfer into computer science would require both interpretation and speculation. However, within the liberal arts, there is a rich literature that describes an even richer microcosm of definitions for minimalism, and subtle differences are considered valuable. The notion of minimalism in art is descriptive—it cannot be used to create art. This is partly owing to the definition of an artist—artworks cannot be constructed using blueprints (and where they can, e.g. in concept art, the blueprints assume the role of the artwork), and artists don't follow rules, they follow their inner musings. And it is partly caused by the wealth of different styles that are subsumed under the term minimalism.

2.4.1 *Minimality of Means*

A recurring issue in minimal art and music is the choice of *minimal means*: painting with enamel paint, choosing monochromes as a medium, tap-playing a desk, or a single-string instrument. Whether this minimalism can be interpreted as a reaction to pop art's excessive use of symbols in the monochromatic paintings of Klein, Reinhardt, Rauschenberg and others, or the static harmony, steady beat and static and sparse instrumentation in Glass' and Young's early compositions, minimal materials are consciously chosen as the basis for artworks. Minimalist plastic art was constructed with the most simple shapes, cubes or cuboids. This motive is perhaps the least controversial, and often Young is quoted to have defined minimalism as “that which is made with a *minimum of means*” (quoted in Schwartz, 1996, 7).

2.4.2 *Minimality of Meaning*

Before minimalism, painting was dominated by Abstract Expressionism that is related to Surrealism in its focus on emotions. Minimalism was considered much more impersonal, and took abstractness to the next level—some paintings had neither title nor intended meaning, and great care was taken to avoid visible traces of the artist and his intentions. “What you see is what you see” summarizes this approach to both painting and sculpture—there is no more to art than can be seen. The usual “function” of art, the expression or embodiment of values, visions, or emotions, was reduced to the maximum. In music, the interpretation of *minimality of meaning* was different; music was used to create hypnotic stances, or a singularity of mood, e.g. by Young in his drone period. Here, the “function” of music was to create a singular feeling, or, expressed negatively, monotony—often with the intention of sharpening the listener's awareness. In other fields, a similarly strong focusing effect can be observed, e.g. in architecture or literature, where open spaces and ellipses work to concentrate the attention of the observer.

2.4.3 *Minimality of Structure*

Not only the materials of minimalism are often minimal, it is also their combination in the artwork that is minimal in *structure*. Both in art and in music, the exposition of the inner structure is purposefully executed, whether in Young’s additive rhythms or Judd’s square-based sculptures. Simple rules and repetition are used to make the structure transparent for the recipient.

A different approach is taken in minimal literature: here, structure is limited by the formal choice of the short story as a medium, minimizing the textural complexity found in other literary works—without ado, the reader is plunged deep into the story. The structure of minimalist literature is often thoughtfully composed, yet readers are encouraged to simply follow the author’s lead without reflecting about a text’s structure. Instead, they are immediately confronted by topic and message. Similarly, minimal typography aims to reduce decoration and distraction, thus reducing cues for the visible structure of the layout. And even in painting, structure is not only minimized to make its underlying principles transparent to the recipient. Often, the minimization of structure follows the objective of finding a balance of inner structure and the artwork’s other qualities. Judd described this as, “Take a simple form—say a box—and it does have an order, but it’s not so ordered that that’s the dominant quality. The more parts a thing has, the more important order becomes, and finally order becomes more important than anything else” (Glaser, 1966, 156).

2.4.4 *Use of Patterns*

Repeating elements have been found in both art and music long before minimalism. The excessive use of patterns, however, introduced a new quality and differentiates minimal music from other “contemporary classical” music. This use of patterns is closely linked to the question of control: On the one hand, control is lost as not pieces but only patterns are composed and combined with rules for correct combination or progress. On the other hand, some minimalist composers expose a tendency to completely control not only the performance but also the form of reception. Between these extremes, composers give performers a before-unknown freedom of interpretation within a strict rule system. Through additive processes and phase shifting, the patterns—even if simple in themselves—can be used to create very complex sound textures. In minimal art, serial paintings use small variations to create an overall impression; again, the combination of individual pieces is more complex than the individual works. When recipients learn to identify these patterns, they learn a new perspective that focuses on the combinatory possibilities hidden in the work of art.

2.4.5 *Involvement of the recipient*

“Serious art” is usually “displayed” in art museums, special places built specifically for the enjoyment of art. The division of roles is clear: a piece of art is shaped and given a meaning by the artist, the consumer, or “art connoisseur”, can observe and make his interpretation, but he is clearly separated from the artwork. By stripping painting from everything that is usually connected with meaning, by presenting pure white surfaces, minimalist artists forced the artwork to take on meaning through observation. Minimalist art is different from concept art, where a blank sheet would not reflect the onlooker’s thoughts but would be based on the artist’s (possibly most complex) conception. Minimal art cannot stand for itself, it is not depictive yet it also does not require explanation. This consciously unartistic method of producing art creates a new freedom of meaning for the spectator, who in turn becomes part of the artwork.

2.4.6 *The Minimalist Perspective and Criticism*

Many artists that were associated with the label of minimalism did not agree. Partly, this is because artists never like labels, they tend to understand their work as unique, and consequently resist categorization. And partly, it is because minimalism is understood as a negative term. It denotes the minimal—that which is so reduced that there is nothing that could be less.

Minimalism is thus often linked with the obscure and simplistic. This critique, however, does not extend deep enough. Minimal art seems simplistic only if the effect is examined without observing the cause—minimalism is as much a set of mind as it is a set of practices. A canvas painted with pure white enamel paint, without traces of the artist remaining, is meaningless without the conception of the artist behind it. For the artists, as for this book, this theoretical conception behind minimal works is crucial.

However, this highlights an important quality of the minimalist perspective: it draws attention to the extreme. A key “feature” of the notion of minimalism is its ability to draw critique. As modern electronic musicians, designers must decide how far towards the minimal they dare go.

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