

# **Box, Aspects of Donald Judd**

Essay by Marjorie Welish

# 19

## Box, Aspects of Donald Judd

At some point in his quest for sculptural necessity, Donald Judd settled on the box. Why? Or to put it another way, what was the question to which the morphology of the box was an answer?

As is often true of the artist mindful of modernity, the question to which "Box" is the answer concerns definitions and narrations that are indispensable to thought – and so it was true of Donald Judd. What is sculpture? This question, raised by the theoretically minded witnesses of art circa 1950, seemed to Judd particularly urgent given that the definitive post-World War II art, modernity's most innovative art, was that of painting. In contrast to the radical manifestation of line and plane in the New York School paintings by Jackson Pollock and Barnett Newman, pictorial sculpture seemed woefully retarded. Under the spell of Surrealism, sculpture was still caught in the process of abstracting symbolic content from nature rather than of thinking with the medium to advance an hypothesis about the nature of sculpture itself. This familiar story of the situation as Judd saw it explains his art-historical sources and the ratifying ethos that drew Judd to define sculpture as he did. The point in noting it again is to establish the cultural motivation for subjecting sculpture to what is no less than an aesthetics of definition.

"What is necessary and sufficient to sculpture?" That, in effect, is how early modern artists had phrased the question, and for reasons I shall discuss later, to another question – "What is sculpture?" – Constructivists had answered, "Volume" (or, alternatively, "Materials articulating actual space").<sup>1</sup> If sculpture is an object occupying three dimensions, then mass is not needed to establish the concept; mass is, as it were, superfluous to the definition of this category of object.

To the same question at midcentury, Judd initially put forth artworks at odds with the very Minimalism that his work would later typify. In view of the peculiar works he did contrive, the question posed might have been closer to the following: "What radical paint-

ing done at midcentury is the sculpture most answerable to?" This is the question that is called to mind, given that the artworks he produced labored, on the one hand, to translate the optical nature of color into tactile surfaces and tactile surfaces into reliefs and, on the other, to transfer reliefs from their rightful place on the wall, which was the domain of painting, to the floor, the conventional place for sculpture.

Before 1964, then, Judd resisted sculptural self-evidence. A rigid flocked red surface into which a metal wedge had been stuck is one such object. An inclined plane, also red, on which a grille stood vertically, is another. The first is a painting by default, because it hangs on the wall; the second is a sculpture by virtue of its standing on the floor.

Verbal descriptions such as these reveal how much Judd was thinking about hybridizing the nature of aesthetic categories. These descriptions also demonstrate to what lengths he would initially go to circumvent self-disclosing self-evidence, the objects being contrived to resist any familiarly named thing.

Descriptions can render these objects more familiar only by relating them to formal, stylistic, and art-historical niches. Given that surface is decidedly one formal dimension deemed essential to painting, a reasonable description of an early Judd "painting" might read: "an entity that willfully 'triangulates' the opticality of Barnett Newman's virtually uninterrupted red color-field expanses with the tactility of Yves Klein's flocked monochromes to acknowledge the dichotomous resolution proposed in the surfaces made deep in Jasper Johns's series of 'Flags.'" What Judd meant by the term "specific object" may be a compound of philosophical simples, yet certainly in the aggregated whole, neither the term nor the object it indicates is culturally simple.

Again, compared with the categories of aesthetic knowledge that teach us to respond, say, "equestrian figure," to certain conventions in sculpture, these entities by Judd are other. Early works by Judd are calculated to defer recognition of the given and to call forth an experience of a different sort: notice without a name. At any rate, if one assents to encountering a sculpture by Judd prior to 1964, it is toward no familiarly named thing. Considering the runged inclined plane, corner piece, or dentilated relief, one notes only, "What is it?" That is to say, these objects are peculiar and unhomey in shape despite their use of materials that are commonplace. By pointing and asking, "What's that?" the bemused spectator prompts an ostensive

definition by way of response. To this question, a legitimate answer might be: "I don't know, it's a thing. A thingamabob."

Meanwhile, the species of thing Judd is laboring over is very different from the sort of thing respondents to the New York School – conspicuously Jasper Johns – put into play. Recall Johns's *Target with Four Faces* (1955). Here is an object that violates the principle of aesthetic integrity by bifurcating painting and sculpture – the latter represented by a series of casts of sightless faces. On this aesthetic enigmatic entity about the yoking of antagonistic activities in art, a piece of Heideggerian thought may be brought to bear:

No matter how sharply we just *look* at the "outward appearance" of Things in whatever form this takes, we cannot discover anything ready-to-hand. If we look at Things "theoretically," we can get along without understanding readiness-to-hand. But when we deal with them by using them and manipulating them, this activity is not a blind one; it has its own kind of sight, by which our manipulation is guided, and from which it acquires its specific Thingly character.<sup>2</sup>

An artifact rich in implication, *Target with Four Faces*, together with its companion *Target with Plaster Casts* (1955), urges an interpretation accommodating this Heideggerian view of things. The very constructed aspect of these paintings, which promotes the notion that making a painting (being more than a pun) actually entails physical work and the handling of materials in ways accountable to the medium, has been said to be ironic because it is literal rather than metaphoric in nature; but these works by Johns sustain both metonymic and metaphoric readings at once. As Johns will argue through these and later works – works to which a hammer, ruler, paint, brush, and "turp" can be attached – the immanence of the art object depends on the artist's cognizance of the physical nature of the medium of the thing that is redescribed for this purpose as "the work" or "the work-in-process." The embedded nature of work is not always ironic in Johns, whether the work takes the form of physical activity or mental cognition.

Without resorting to the mysterious or the dreamlike symbol, an artist may conceive a semantics of artifactual content that is no less present in the world for being between categories or genres – or for being known in its parts yet elusive in its totality. Rauschenberg's assemblages would qualify<sup>3</sup> – so too, at his formative stage, would Judd's artifacts. This is precisely strategic on Judd's part, even if the artistry of materials is crude, because installing such a (nameless)

object where a sculpture should be compels the viewer, whether critic or connoisseur, to resort to description.

Description in lieu of a name accomplishes several aesthetic and philosophical goals. Description insists on the material or structural foundations of form; not being taken for granted, description sets forth the meaning of the work in terms of a direct experience. Then, too, rendering an object by reducing it to phenomenological description postpones that sort of classification through language that would substitute for engaging with the palpable object itself.<sup>4</sup> In fact, Judd's material description of early artworks says as much. "Light cadmium red on wood with black enameled metal pipe," he said, identifying a work from 1962 (see Figure 31).

Let us substitute this description: "Wooden angle painted cadmium red supporting an opposing black pipe." This description also allows the possibility of fixing a reference where "Untitled" and even the single convenient name or concept "volume" or "sculpture"<sup>5</sup> is insufficient to fix a reference. Common building materials in simplistically concrete syntax manifest a rude actuality that the Productivist Vladimir Tatlin and his Constructivist nemesis Naum Gabo could both appreciate. In contrast to Tatlin's *Corner Counter-Relief* (1914-15), Judd's piece may be reconfigured verbally as follows: "a structural reduction in answer to Tatlin." (See Figure 32.) This analytic description of Judd's work posits stylistic context as content. At any rate, art-historically grounded works by Judd lend intention to Judd's form language, however naïve at this point. One thinks of Gabo and his allusion to the definition of sculpture: "It [i.e., 'abstraction'] is always stated as a reproach that we form our materials or abstract shapes. The word 'abstract' has no sense, since a materialized form is already concrete. . . ."<sup>6</sup> Sets of descriptions concerning the peculiar objects that Judd has put in place, then, reveal the common ground of meaning through certain properties: three dimensions implicating volume arrived at through construction.

A three-dimensional entity general enough to be considered an object like any other undergoes conversion to specificity when actually built, and it is meant to frustrate an essentialist reading of squareness or redness – or even of volume. Even when sculptural definition is at stake, "the art of three dimensions" is an ontology the generalizing essence of which, Judd hopes, must be apprehended in actuality. Even when definition is at stake, the sculptural entity that Judd has contrived as a way to sabotage definition calls forth descriptions that labor to name a definitive ontology – and fail.

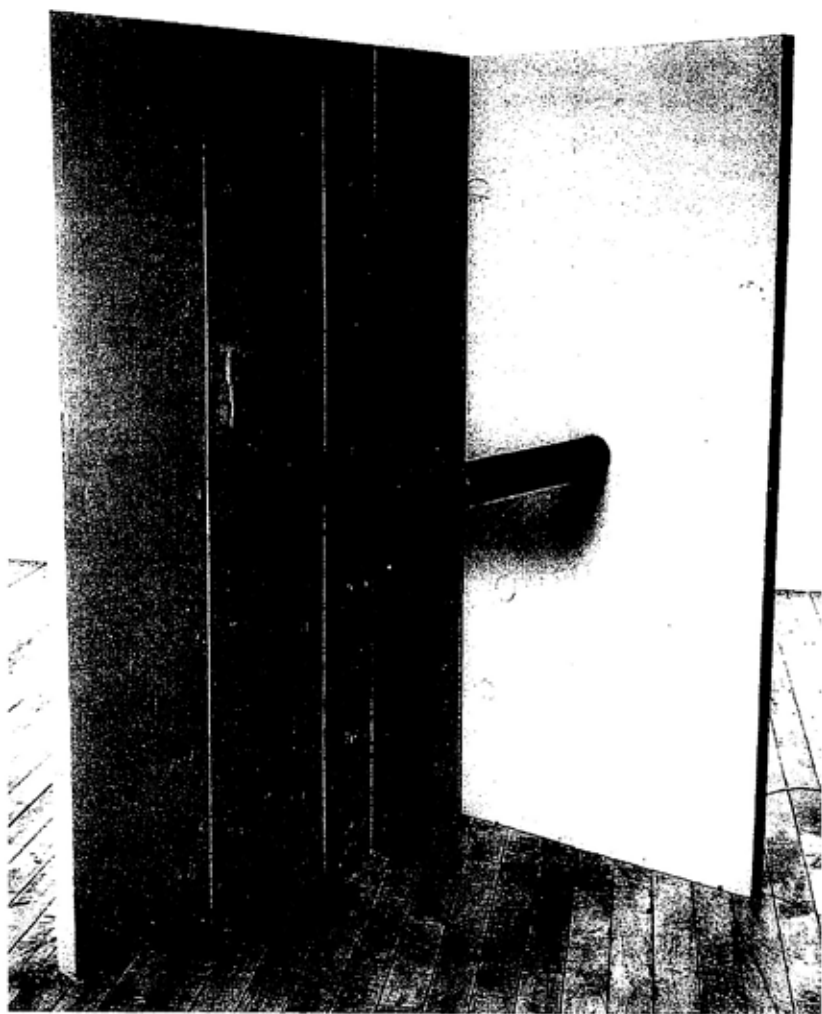


Figure 31. Donald Judd, *Untitled*. 1962. Light cadmium red on wood with black enameled metal pipe,  $48 \times 37\frac{1}{8} \times 21\frac{1}{8}$  inches. © Estate of Donald Judd/Licensed by VAGA, New York. Courtesy of the Donald Judd Estate.

In 1964, the not-yet-boxlike thing soon undergoes a conversion to the standard form of itself. Replacing the unhomely morphology of early work is the shape of a box, one specified through industrial materials and manufacture. Aluminum, Plexiglas, and plywood – the materials are intended to qualify the general and universal shape:

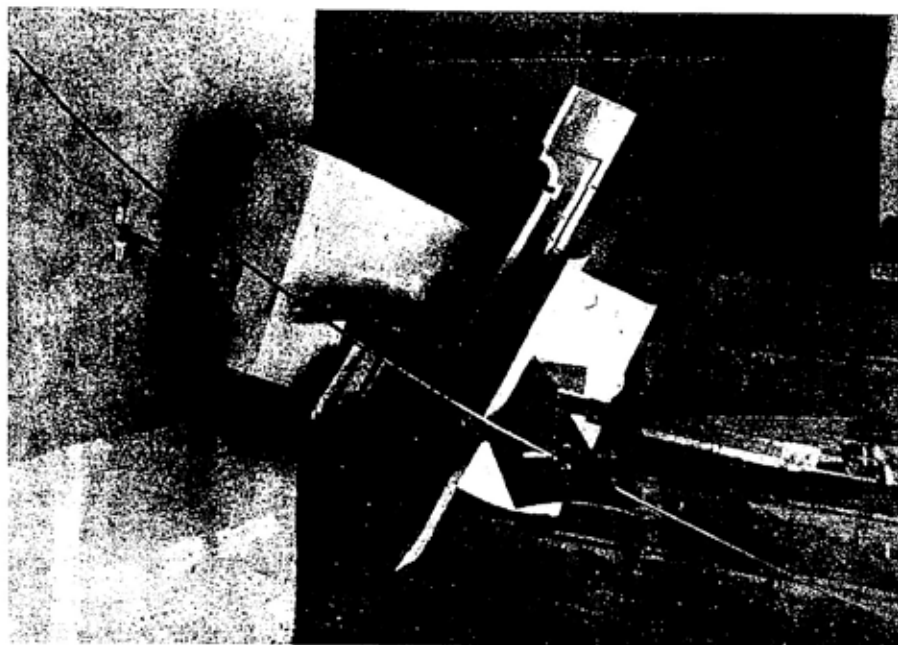


Figure 32. Vladimir Tatlin, *Corner Counter-Relief*. 1914–15. Mixed mediums. (Whereabouts unknown.)

Materialism adjusts Idealism, and the ordinary language of manufacture qualifies the language of form. In contrast to Judd's earlier works, the box is conspicuously commonplace. Indeed, this neutrality is the point.

What the box loses in interest, however, it gains in a paradoxical aesthetic indifference (see Figure 33 on p. 233). Initially, a box that elicits mere notice helps neutralize the aesthetic encounter, and the Minimalist box obliges the viewer wandering through a gallery to cope with this sort of aesthetic. To cover for concepts arrived at experientially after the fact, the viewer assents to the three-dimensional item by virtue of having named it. "Cube!" she says – or "Box!" – remarking that it is like a container of some sort.

Perhaps because all "cubes" and "boxes" tend to be treated as though the meanings of these words are interchangeable, the language employed to represent the cube that Judd constructs is carelessly applied even though volumes of precisely cubic dimension rarely appear in his oeuvre. The word "cube" or "box" may suggest itself because these names are handy. Then, as Quine says, since the

universals of language when translated into things become essentials,<sup>7</sup> we might carelessly assume that by naming the thing we are free to manipulate language to ascertain and investigate the essential nature of the thing. Words replace objects of experience; and with Judd's objects, which feign synonymy with the "cube," words replace objects readily. Thus, to frustrate this synonymy, Judd adjusts the proposed object so that it falls between names and categories of reference. Put another way, as in Adorno's cultural theory, the irreconcilability of concept and object is integral to art; and thus deliberately exploited by Judd is the dimensional conundrum of the not-cube and the unboxlike box relative to the essentializing words of "cube" and "box."

"What is sculpture?" Fundamentally speaking, this is the question to which Minimalism gives no simple answer. If Minimalism addresses the issue of definition and supplies a consideration of the essential and minimal condition for some thing's being an artifact, then Judd addresses the essential condition that is at once more general and more specific than sculpture traditionally speaking, and he builds a three dimensionally constructed entity, one concretized precisely by virtue of the fact that it is formally and materially at odds with the type of object this entity is most like. His box is coded as a sign, a sign that signifies what the ordinary box has in common with the essential sculptural object from which utility has been withdrawn. Furthermore, despite being simple in shape, these works of Minimalism are not simply shaped: They are not carved or modeled toward an emerging unity.<sup>8</sup> They are constructed – indeed, they are often fabricated – according to plan. The content of the form is informed through this material difference. It is what separates Minimalism and its concern for definition from Minimalism and its pursuit of revelation.

\*

Speaking conventionally, we might say that functional relations assume the constitutive link between part and whole. As the doctrine emphasizing the practical utility of the necessary relations in form, functionalism has had a long and aggravated role in the history of art, yet it is no less significant for all that. Its topics include form well adapted to use, the contest between rationalism and empiricism, the compelling idea of the architectonic, the critical impact of industry on technology, and the language of design. These topics, among others, are perennial concerns of the cultural history that would investigate the practical dimension of art.

Aesthetics has a long tradition of favoring utility over beauty, a



tradition that dates back to the Greeks – most notoriously, to Socrates. As the story goes, Socrates, who was stupefyingly ugly, was prepared to argue that he was more beautiful than Critobulus by virtue of the utility of his features. Once Critobulus established that, like a sword or a shield, features are beautiful insofar as they are fit to their purpose, Socrates maintained that he himself was much more beautiful than his adversary. His reasoning: Whereas Critobulus had eyes that looked only straight ahead and a nose whose nostrils were directed down, these features were, evidently, less well adapted to their purpose than his own, because his eyes could scope from side to side and because his nostrils turned upward to take in all smells.<sup>9</sup>

That the dialogue instigated by Socrates was mischievous matters less than the agreed-upon presupposition that utility could rival beauty on its own ground. The significance of this position for Minimalism eventually is the assumption that function is good and worthy even as mere beauty is to be disdained – or, rather, that functionalism assumes that beauty should not impede function. Function determines the condition of beauty attained in an artifact.

Functionalism informs a narrative that gives privilege to engineering and to industry – and ultimately consecrates industrial design. From a certain perspective, then, the history of technology coincides with the history of utility as a Minimalist alternative to that of biology that the early modern artists had found adaptive to sculptural definition. As brought into prominence through Roman engineering and passed on subsequently as a value during the Industrial Revolution, functional use informed the aesthetics of modern Constructivism – and especially the Productivism that is antagonistic toward making art that is not immediately useful. Whether or not Judd's personal account of his coming of age acknowledges it, a collective history of functionalism's fascination with tectonics constitutes a compelling cultural antecedent for Minimalist materials, procedures, structure, and symbolic form.

Elementary procedures constituting an elementary form of language of tectonics had already been proposed in the mid-nineteenth century, when Gottfried Semper laid out a materialist theory of meaning. With his taxonomy of material, technique, and function, Semper shows constructive principles at work, just as carpentry discloses the form of its making in structures rigid yet moveable, or as weaving reveals its constitutive element of knots in series.<sup>10</sup> In this sense, handicrafts are generative technologies.

Transposed to the Industrial Revolution, technology became a

value – and, perhaps, an end in itself. Under certain favorable circumstances of history, unadorned industrial technology proved to wield more aesthetic purpose than much of the fancy Victorian painting and sculpture that had been made for the purposes of beauty. It is in this spirit that the Crystal Palace of 1851 suggests itself as an antecedent representative of the vernacular of utility put in play as industrial design and adapted a century later by Minimalism.

The beauty of the Crystal Palace aside, the sheer concentrated practical inventiveness remains culturally significant. Architectural historians note that Paxton's design won the patronage of Prince Albert because it proposed that building in glass and cast iron "required no massive foundation,"<sup>11</sup> while its pioneering prefabrication allowed for the erection of the exposition hall with all due speed. Preconceived rather than constructed on-site, modular prefabrication expedited matters even as the process shifted from creativity on the site to creativity on the drawing board. To put it another way, we can say that the augmentation of the greenhouse to the size of the exposition hall did not take place by rote scaling up but by reconceiving the procedures that could allow for the timely appearance of a credible public structure.

"What is a form of sculpture rendering function transparent to perception?" To ask this question is to appreciate that volume – not mass – will suffice as an answer both perceptually and analytically. Aside from exploiting the functional potential of material, the functional suasion of the assembly line made possible through reliance on the template and module has implications for functional procedure. Utilizing the module of common construction and prefabricated parts to construct a sculpture surely indicates Judd's intention to align his artifact with the history of ideas that attaches the modern to mechanical and architectural form. For Judd's work, as for Minimalism in general, the first machine age of 1900, with its "predisposing causes,"<sup>12</sup> allows us to speculate on the relation of material to procedure as well as on the relation of both of them to intended cultural meaning. With what tradition would the Minimalist artifact find the best fit? The answer: the tradition to which aesthetic functionalism (formalism) is determined in alignment with the history of the idea of utilitarian functionalism. This formulation does, at any rate, suggest a plausible answer.

The question of whether utility should be actively promoting aesthetic or practical ends reached an ideological crisis in Soviet Russia, with Constructivists and Productivists staunchly dialectical

on this issue. Constructivists believed that a form of liberated work must accompany the aesthetics of utility. The engineer Naum Gabo recalls shouting matches between those like himself, who believed that aesthetic and practical forms of utility should be kept distinct,<sup>13</sup> and others representing Tatlin's Productivist view, who wanted them merged.<sup>14</sup>

(The implications of literal and phenomenal materials and their construction are exemplified in the notion of transparency. Glass displays its quality of transparency and promotes the value of self-evidence in formalistic structures built by the former engineer Naum Gabo. Edge disembodied in a sculptural line and planar transparency answered in opacity both emphasize the design of an implied volumetric – not massive – three-dimensional space. Or should one say, a three-dimensional visualization of what [Gabo hoped] would be understood as constructing mathematical surfaces? Line developing into curved surfaces meant to be analogous with topological space distinguished the utopian aesthetics of Gabo, his brother Alexander Pevsner, and El Lissitzky from the utopian utility defended by Tatlin, Rodchenko, and Stepanova. Contesting the territory of transparency for rational or, alternatively, empirical, ends remains an ideologically freighted theme of the era. Meanwhile, transparency as a problem of knowledge manifests itself in the Cubist superpositions of transparent planes.<sup>15</sup> This Cubist method is directed toward creating ambiguity, not self-evidence,<sup>16</sup> despite structures that open the interior to view. Interior on a par with exterior formal structure will, however, promote a formal clarity not only in Picasso's paper construction of a guitar, the "sound box" of which is open to view, but also in Tatlin's constructed reliefs for which the Picasso had been a provocation.)

Whether functionalism should be purely aesthetic and kept remote from matters of utility or rather the opposite – a manufacture that advocates no art but that which aims at utility – inspired many manifestoes and urgently proclaimed calls for action in short-lived magazines. *Veshch/Gegenstand/Objet*, initiated by El Lissitzky and Ilya Ehrenberg in 1922, promoted a theory of art for the new Constructivist object that did advance an international discourse on languages of functionalism at the expense of mere utility. One of its editorials proclaimed,

*Objet* will take the part of constructive art, whose task is not to adorn life but to organize it. . . . Obviously we consider that functional objects turned out in factories – airplanes and motorcars – are also the product of genuine art. Yet we have no wish to confine artistic creation

to these functional objects. Every organized work, whether it be a house, a poem, or a picture – is an “object” directed toward a particular end. . . . Primitive utilitarianism is far from being our doctrine.<sup>17</sup>

To gauge the meaning of Minimalism years later, one looks to how the artist or his or her artifacts weigh in on this issue. Indeed, in the 1970s, although he had set out to design furniture in a domestic habitat that he controlled, Judd himself would legislate against exhibiting his sculptural objects together with his applied objects. But the ideological content of aesthetics does not resolve itself here: Of chief importance in understanding Minimalist form is noting Judd’s struggle to synthesize aesthetic and practical traditions within the object. How a box can be made to signify varyingly weighted practical – then rational – content is something that qualifies the object throughout Judd’s career. A formalism that produces an empiricism in tension with rationalism is decidedly the energizing, creative content animating Judd’s work.

The significance of recalling the above episodes from the history of the idea of functionalism for Judd is decidedly this: To see indicated relevant episodes from this history is to appreciate a notion of functional form that is antecedent to Judd’s, one that will come to supersede the artist’s own immediate actual history (with its exposure to Johns’s work), and to which his aesthetic more and more conforms.

\*

What was the question to which the morphology of the box was an answer? Can the functionalism of form find a vernacular? More precisely, we can ask, “Can the functionalism of form find a vernacular grammar both worthy of yet resistant to utility?” (See Figure 33.) If restating a problem causes alternative solutions to emerge, perhaps, then, restating the terms reserved for geometric figures would disclose a vernacular domain in which modern functionalism would remain uncontradicted.

A sculpture, then, might be described as an object drawn from daily experience, one distinguished through its relation to function. A box appearing under this pragmatic auspice satisfies the required vernacular contextualization. An artifact of basic construction, a box represents a piece of fabrication well within reach of common skill, and this elementary handicraft lends further vernacular reference to the sculptural form chosen by Judd. (The relation of the way

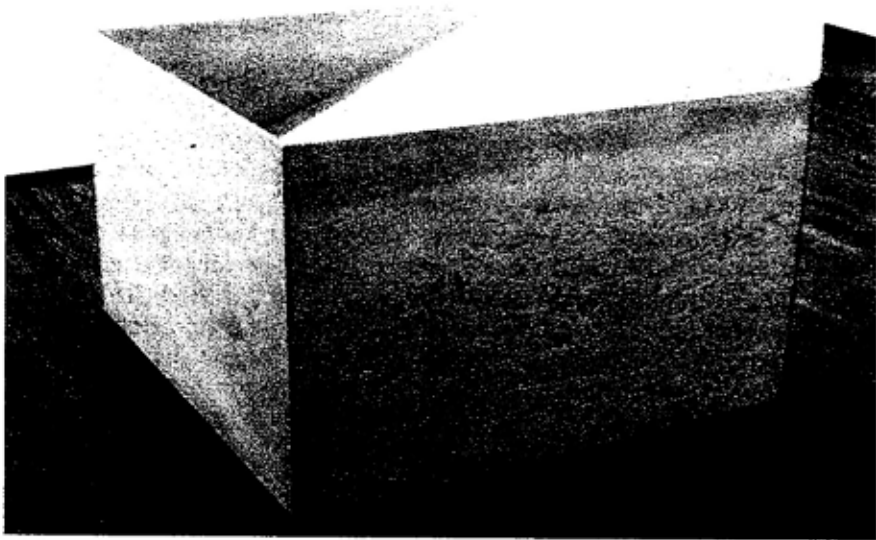


Figure 33. Donald Judd, *Untitled*. 1976. Plywood, 5 × 3 × 5 feet. © Estate of Donald Judd/Licensed by VAGA, New York. Courtesy of the Donald Judd Estate.

something is made to the function it serves will be an aesthetic that is self-consciously adopted by Minimalism and exploited by the procedure-driven post-Minimalist artist throughout the 1960s and 1970s. Immediately, those forms that are transparent to their production will favor materials and procedures associated with building construction. This is what Judd had done when he elected to make a corner construction of wood connected by pipe in order to make manifest the “arts” of carpentry and plumbing. Consistent with this emphasis on the building arts are works by the Canadian artist Jackie Winsor, who has shown nails driven into stacked laminated plywood, board bound and repeatedly wound with hemp, and other works that display work rather than craft.)

Finally, the vernacular may be said to reside in the synthesis of skill for practical ends associated with the philosophy of American pragmatism (and John Dewey in particular, whom Judd had read with interest). Not to lay too much emphasis on this aspect of the vernacular, given that his studies in art history at Columbia University would emphasize European tradition; nevertheless, the artifacts

Judd did produce invoke a nativism, the sort of industrial design a homespun carpenter would produce.

Relocating to Marfa, Texas, in 1971, and subsequently designing furniture gave Judd the opportunity to investigate prototypes of vernacular volumes and their manufacture.

Later on, he recalls,

In the middle eighties I wrote that in the middle sixties someone asked me to design a coffee table. I thought that a work of mine which was essentially a rectangular volume with the upper surface recessed could be altered. This debased the work and produced a bad table which I later threw away. The configuration and the scale of art cannot be transposed into furniture and architecture. The intent of art is different from that of the latter, which must be functional. If a chair or a building is not functional, if it appears to be only art, it is ridiculous. The art of a chair is not its resemblance to art, but is partly its reasonableness, usefulness and scale as a chair. . . . A work of art exists as itself; a chair exists as a chair itself.<sup>18</sup>

Conspicuous here is Judd's initial impulse to derive specifically functional objects from a kernel of function, however estranged from literal instrumentality that functional design might be. Also significant is his subsequently learned insistence that the aesthetic and practical ends for objects be kept distinct. Like the Constructivists rather than the Productivists, Judd comes to define the aesthetic object in terms of functional resistance – that is, intelligible construction in tension with mere use.

Once Judd begins to design furniture, he still exercises a form of language derived from deploying horizontal and vertical elements that describe some version of a volume. Meanwhile, table, chair, bench, and bookcase – all invite a consideration of the vernacular volume familiar enough to be taken for granted, functional enough to entail use, and formal enough to perpetuate a lexicon of relations (open and closed, left and right, top and bottom). Whether or not Judd ever was an interesting designer of furniture, he showed a studiousness toward the box both as a reduction and for its structural potentiality. Implicating a life-world if necessary, the basic rectangular volume may move into a pragmatic set of relations, for example, simply by lengthening a vertical surface to articulate the back of a chair.

It is interesting in this regard to consider the furniture manufactured under Judd's direction as the pragmatic function in objects against which the boxes – specifically, the plywood boxes with de-

pressed and/or angled "lids" – are containers rendered unpragmatic. Functionalism for nonfunctional ends defines aesthetic function in Russian Futurism and the formalisms it continually inspires, so that the functional lid rendering the container opaque once it is disposed diagonally seems to be a stylistic and historical homage to the early Russian visual language even while exercising its structuralist prerogative. In 1976, when Judd put on exhibition the first group of his plywood boxes, he announced not simply a change in material but a lucid configuration of Constructivist structure by which the recessed surface made opaque the transparent instrumentality of the box as practical container.

(Doubtless, the formal logic of structuralism aided the semiotics of reference embedded in the common type. In Le Corbusier's concept, the *object-type* resides in the "classic" status attained in design through which the designer recuperates a lost vernacular. Conferring the status of *object-type* on machine-made objects of daily use that have become commonplaces would seem to have little in common with Judd's furniture except insofar as the ordinary cardboard box or plywood crate or air-conditioning duct informs fundamental material and formal conditions in vernacular volumes of tables, chairs, and bookcases.<sup>19</sup> The standard in furniture seems to be Judd's goal: "reasonableness," as he calls it. Even so, Judd is not alone in his interest in the type; during the 1960s, notes Alan Colquhoun, the type as preexistent form was a preoccupation of Neo-Realist architecture.<sup>20</sup> Meanwhile, Minimalism in general tried to understand the principle of standardization and other aspects of functional form in order to criticize modern art from within [since, as Colquhoun argues, the rote application of modernism had left modern art vulnerable to postmodern critique from without]; structuralism provided that means of internal critique.<sup>21</sup> Given an interest in the vernacular, Minimalism favors the "box" rather than the "cube." At least, the modernist "box" would accommodate the requirements of sculpture better than the new-fangled postmodernist "shed." Throughout his career, Judd seems determined to resist postmodern revisions of objects.<sup>22</sup>)

If a sculptural object is to be deemed transparent to what it contains, then what does the box transparent to sculptural function contain? A self-displaying thing, the box manufactured according to Judd's wishes becomes, during the 1960s, a sort of container for hue and light; then, in the 1970s, the box becomes occupied with structured relations.

Since Reinhardt, Newman, and Klein had each proposed a material condition for the sheer optical intensity of light – a phenomenon reconceived with industrial means by Dan Flavin and others a decade later – and demonstrated the implications of chromatically saturated environments to advantageous ends, Judd could hardly be expected to ignore these strong exemplars of the art of three dimensions in his own research. Color-field and Minimalist artists alike could take advantage of environmental color that, nonetheless, did not owe its structuring of transparency to Cubism.

That is to say, during the 1960s, when light fixtures articulated the corners of rooms and otherwise augmented the palpably environmental possibilities inherent in color-field painting, the interiors of Judd's boxes, selectively articulated in color, also sought to create light-filled space. Conspicuous in this way are the wall Stacks, a vertical series of cantilevered frames mounted on the wall, their interior shafts of light initiated from the gallery lights above. Optimally a column of hued light apparently binding the physically discrete series of boxes cantilevered from the wall, this colored ether, a surrogate for painting in the industrial age, displays properties that dramatize the normative polarity between optical painting and tactile sculpture within a single artifact.

Then, in the 1970s, Judd's boxes began to demonstrate another sort of self-disclosure. Functionalism under the structuralist aegis shows itself as a display of opposing relations of the series' interior elements. Returning to the arithmetical order he had been using, Judd now extracts from it a formally plotted composition consistent with the cultural moment. Internally partitioned in simple series to reinforce this logic were boxes mounted on the wall that were pre-occupied with relating variable orders within the interior of the box to the fixed modular exterior. A logic of operations guides the sequence introducing the parts of the interior: An internal partition first installs a median, then a second partition (oblique or not) placed right of it establishes itself as half as much, and a third partition (oblique or not) left of the median establishes itself half again in the last box in the series to reveal a division into fourths. A kind of *brise-soleil* for structuralists plays itself out in conceiving form. The assumption that there exists a reality born of a logical structure may be seen throughout Judd's oeuvre yet is particularly pronounced in the 1970s when binaries of tilted and untilted louvers partition his plywood boxes. Judd has said, "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."<sup>23</sup> In 1964, when Judd made this comment, his concern was to avoid those kinds of compositional orders suggestive of the figure. By the time he died in 1994, Judd had allowed a variety of alternative sources for ordering parts to wholes into his constructed work: from industrial design to a "linguistic" object.

What is the question for which the articulated box supplies an answer? What sort of construction will allow for reference to normative structures in discourse redeployed intelligibly for art? In Judd's late work, function has become tempered with the logic of formal and informal operations of all kinds. Note the contemporary milieu of conceptual artifacts advancing syntactical arguments ranging from randomness in heaps and scatterings, to literal arithmetic measurement, to the logic of groups. All this experimenting in intelligible structure suggested modes of ordering the interior of the rectangular volume.

Meanwhile, by shifting from color to rational measurement, Judd is able to accomplish a dematerialization of the box's interior by converting aesthetic to cognitive structure. At least, he brings these aspects into equilibrium. Late series feature boxes hung horizontally so that the interior rear lapidary surfaces can be seen past the structurally deployed partitions (or viewed even as the partially open front surfaces expose the interior to view). In this way, measurement and proportion can retain their rational content, satisfying the aesthetics of Classicism<sup>24</sup> while bringing the functional nature of use into the domain of a functional language.