Cutting Pollock Down to Size: The Boundaries of the Poured Technique

Claude Cernuschi and Andrzej Herczynski

"I enjoy working big and—whenever I have the chance, I do it whether it's practical or not....I'm just more at ease in a big area than I am on something 2×2: I feel more at home in a big area." —Jackson Pollock

1 The Question of Size

Even to the most casual spectator of modern art, Pollock's statement should come as no surprise; the paintings that most readily come to mind whenever his name is mentioned—*Autumn Rhythm* (fig. 1, *Jackson Pollock: A Catalogue Raisonné* [hereafter JPCR]: 297), *One* (JPCR: 283), *Number 32* (JPCR: 274), or *Blue Poles* (JPCR: 367)—can measure up to nine by eighteen feet. Pollock, of course, was not the only member of his generation to have painted on a large scale. In one of the earliest monographs on the artist, Bryan Robertson, an Englishman, even construed the prodigy of American painters to employ colossal dimensions as reflecting the dimensions of the American continent: "The Big Country demands a big art form." But Pollock's stated predilection for large scale betrays something altogether more fundamental than a simple personal or even national preference. It has been surmised, and with good reason, that Pollock's partiality for larger canvases stemmed directly from his practical need to accommodate the widening breadth of his gestural strokes. As years of experimenting with the poured technique prompted him to dispense fluid paint with increasing spontaneity and élan, Pollock engaged the creative act in a physically unprecedented way—employing, as is now almost cliché to say, not just his hand and wrist, but his arm and even entire body in the process. On this account, the increasing freedom and musculosity of his technique compelled him to expand the size of his paintings accordingly. It has also been surmised, no less persuasively, that Pollock and his Abstract Expressionist colleagues sought to make grand gestures in the existentialist as much as in the literal sense, as if increasingly...
large canvases provided more effective means of expressing and communicating emotional states to observers not easily moved by an abstract idiom. Revealingly, one of Pollock's most important and influential contemporaries, Mark Rothko, declared that he painted “large pictures,” not because he wanted to make a pompous statement in the grand manner, but because he wanted “to be intimate and human.”

Yet a number of paintings recently attributed to Pollock,⁹ and the trove of poured abstractions belonging to Herbert Matter, are relatively small in size. Some measure just over seven by nine inches. This discrepancy immediately raises the question as to whether such pieces, on these grounds alone, would introduce an aesthetic anomaly in the Pollockian canon, an aberration perhaps, a minor trend largely inimical to the imposing canvases with which the artist is so often associated. Not so. In fact, it was hardly unusual for Pollock to work on a small scale. The epigraph to this essay notwithstanding, Pollock’s entire production actually includes relatively few large pieces. After reviewing the 290 paintings Pollock executed between 1943 and 1956, Jeffrey Wechsler and Donna Gustafson found that “only 66—less than a quarter—have either height or width (but not necessarily both dimensions) measuring 72 inches or more. In contrast, 146 paintings have the quite small dimensions of about 36 by 36 inches or less. Therefore, one half of Pollock’s mature output was of very modest size.” Since his analysis intentionally excluded works on paper (which also tend to be smaller in scale), Wechsler drew the rather unexpected but undeniable conclusion that “Pollock was essentially a painter of small pictures.”⁶ Against this background, even if the authorship of the works in Herbert Matter’s collection remains in dispute, their scale is hardly inconsistent with Pollock’s aesthetic propensities and working methods.

Still, the smallest Matter pieces are almost as small as Pollocks get—at least, insofar as paintings are concerned. Although Silver and Black (JPCR: 310), which measures 12 1/2 × 8 3/4 inches (31.7 × 22.2 cm), and the two panels of Silver and White Diptych (JPCR: 312), which measure 11 1/2 × 8 1/4 inches (29.2 × 20.9 cm) each, are well within the range of many of the works illustrated in this catalog, only one poured painting on record, Poured Black Shape II of c. 1950 (JPCR: 294), at 5 1/2 × 6 3/4 inches (14 × 17.1 cm), falls below the smallest newly-found painting. Thus, even if statistics confirm that the scale of the recently discovered pieces is hardly anomalous, their position close to the smaller end of Pollock’s repertoire—whether they are accepted in the canon or not—invites further speculation as to the role of physical size in Pollock’s overall production. Upon reflection, several questions readily come to mind—questions left hitherto unresolved in the literature on the artist. Are smaller paintings simply quantitatively different from the larger ones, or do they reveal qualities exclusive to the minimal end of Pollock’s scale? Was Pollock’s process uniform, or did different sizes raise different technical challenges for him as he worked? If so, how large or small could individual paintings range? What is distinctive about the very complexity and scale of the patterns Pollock created? And would he reach a point, at either end of the spectrum, where size alone would curtail the effectiveness of his creative process?

II Scaling Things Up

It is, of course, impossible to gauge the full impact of all factors—especially non-aesthetic ones (such as financial or practical)—upon Pollock’s choices relating to the size of individual pieces. Many of these decisions, as his wife, Lee Krasner, recalled, were actually deferred until the canvases were being stretched.⁷ It has also been suggested, and not unreasonably, that Pollock may have reluctantly reduced the scale of occasional works in order to enhance his chances of selling them. In which case, the smaller works would not bespeak an aesthetic avenue voluntarily explored, but Pollock’s capitulation to the vagaries of the art market, an assumption prompting some critics to dismiss the smaller pieces as Pollock “at his weakest and less sincere.”⁸ Wechsler and Gustafson’s findings notwithstanding, the image of Pollock as a painter of heroic scale remains nearly impossible to dislodge. Pre-
dictably, the majority of commentators still maintain that, within the scope of Pollock’s entire production, the larger works stand out as the most successful. When viewed against the backdrop of the artist’s admitted preference for working in a large area, it is no wonder that this view still resonates.

Other scholars, however, have pursued alternative approaches. Instead of making subjective value judgments, Walter Darby Bannard simply pointed out that a “big painting is not just bigger than a small painting, it is different, and it is different not only because it has a different effect...but because it must be made in a different way.” Although Bannard did not fully explain the necessary adjustments Pollock would have needed to make when working on different scales, his line of reasoning—coupled with his observation that the size of the canvas can change but the artist’s inherent physical limitations do not—helps identify the kinds of constraints under which Pollock may have worked. Indeed, the broad range of his formats indicates that his decisions in matters of scale rested primarily on technical and aesthetic grounds; and that having invented a new technique, Pollock would have been tempted to explore its potential to the full. If he sought to paint a large canvas, it stands to reason that he may have pondered how large it could span; if a small one, how small. From this vantage point, the most consequential question to answer is whether Pollock enjoyed unlimited freedom or, conversely, encountered tangible restrictions when selecting the size of his works.

Reluctant to consider the issue of size on its own terms, some critics have, intriguingly, made size beholden to composition rather than vice-versa. In their view, it is not the literal dimensions of Pollock’s canvases, or any physical limitation, that determines their appearance; it is their appearance—more specifically, their articulation of a new kind of abstract pattern—that renders their literal dimensions indeterminate. In 1948, for example, Life Magazine published a “Round Table on Modern Art,” where no less esteemed a writer than Aldous Huxley disparaged Pollock’s work by stating: “It raises the question of why it stops when it does. The artist could go on forever.... It seems like a panel for a wallpaper which is repeated indefinitely around the wall.” Although pejorative comparisons to wallpaper would continue to shadow Pollock’s work, enthusiasts such as Allan Kaprow detected immense aesthetic possibilities in the potential expandability of his patterns. Pollock’s art, to his mind, outwits the confines of the rectangular field by giving the spectator “the impression of going on forever...a continuum going in all directions simultaneously, beyond the literal dimensions of any work.” The four sides of the painting,” Kaprow continues, “are thus an abrupt leaving-off of the activity which our imaginations continue outward indefinitely, as though refusing the artificiality of an ‘ending.’” The abstractions

would be most advantageously perused, Kaprow concludes, inside a “medium-sized exhibition space with the walls totally covered by Pollocks,” allowing the works to be experienced no longer as paintings but as “environments.” Both Huxley and Kaprow, although for different reasons, are suggesting that, by displaying no centers of attention, Pollock’s allover compositions give the impression of transcending their actual size. Their visual impact hinges not only upon their physical dimensions, but also, if not more, upon the development of a pattern that gives the impression of infinite expandability. From this perspective, it is the experiential feeling of expansion—not just the literal, physical size of the canvas—that matters most.

This is a powerful point. Pollock readily acknowledged composing so as to preclude a central focus. “My paintings,” he declared, “do not have a center but depend on the same amount of interest throughout.” There was a reviewer a while back,” he also observed, “who wrote that my pictures didn’t have any beginning or any end. He didn’t mean it as a compliment, but it was. It was a fine compliment.” The alleged repetitive aspect of Pollock’s patterns, coupled with his own statements about preferring to work in a large area and avoiding dominant focal points, have, in this way, legitimized the intimate connection established by critics between large scale and allover composition, and fueled the notion that his paintings could be expanded indefinitely to little or no detriment. In a key essay entitled “The Crisis of the Easel Picture,” Clement Greenberg argued that modern art’s stress on decorative patterning undermined the tradition of illusionistic art so severely as to jeopardize the integrity of easel painting. The challenge, he wrote, came from “the all-over, ‘decentralized,’ ‘polyphonic’ picture that relies on a surface knit together of identical or closely similar elements which repeat themselves without marked variation from one edge of the picture to the other. It is a kind of picture that dispenses, apparently, with beginning, middle, end. Though the ‘all-over’ picture will, when successful, still hang dramatically on a wall, it comes very close to decoration—to the kind seen in wallpaper patterns that can be repeated indefinitely—and insofar as the ‘all-over’ picture remains an easel picture, which somehow it does, it infects the notion of the genre with a fatal ambiguity.” Since Greenberg mentioned Pollock (as well as Mark Tobey and Jean Dubuffet) by name, there is no doubt as to whose compositions he credited for plunging the tradition of easel painting into “crisis.” That Pollock and Greenberg were in frequent contact, as well as used similar expressions—“My paintings do not have a center” (Pollock) and “the all-over, ‘decentralized,’ ‘polyphonic’ picture” (Greenberg)—betrays how much Greenberg influenced Pollock’s own ideas.
III Finite or Infinite?

But is the view that Pollock’s paintings are infinitely expandable entirely convincing? Implicit in Huxley, Kaprow, and Greenberg’s reasoning is the assumption that the kinds of issues Bannard raised—that larger paintings not only have a different effect, but must also be made differently—are somehow irrelevant to Pollock. After all, if his compositions simply repeat similar elements without variation from one end of the canvas to the other, then larger paintings need not be made any differently than smaller paintings; they are simply more of the same. It is their ostensible repeatability that, for all intents and purposes, permits their surfaces to be expanded indefinitely. Yet this was not an impression Pollock sought to encourage. In fact, when the architect Peter Blake designed a museum expressly to house his abstractions, envisioning the use of mirrors to amplify and expand their effect, Pollock (though enthusiastic about the project in general) complained that Blake saw him as a “mere decorator.”

That Pollock’s abstractions often give the sensation of expanding beyond the literal, physical confines of the canvas can hardly be gainsaid. But although Pollock can legitimately be placed within a larger context of artists who employed allover composition (e.g., Ad Reinhardt (fig. 2), Mark Tobey, Richard Pousette-Dart, Joaquín Torres-García (fig. 3)), critics who attribute the alleged effect of expandability exclusively to pattern or design overlook that it was hardly uncommon for Pollock to have his skeins of paint appear to fade in intensity, or “turn back,” before they get to the edge. The decrease of pictorial incident towards the frame creates the effect of conspicuous margins, of a “neutral” territory, in a significant number of canvases. Thus, in spite of Lee Krasner’s reference to Pollock’s work as “unframed space,” the frequent appearance of margins implies that, in those cases at least, Pollock clearly intended to maintain a certain sense of visual containment. More to the point, the singularity of the poured technique forced Pollock to work under very different conditions and constraints than, say, Reinhardt, Tobey, Pousette-Dart, or Torres-García—conditions and constraints that, as Bannard intimated, may have circumscribed the actual size of his paintings. As E. H. Gombrich so aptly put it: “The artist, clearly, can render only what his tool and his medium are capable of rendering. His technique restricts his freedom of choice.”

Even Allan Kaprow—who hoped sensations of infinite expansion would ensue from exhibitions wherein spectators are surrounded by poured paintings on all sides—recognized, in another context, that the patterns in Pollock’s abstractions resist facile description. “Instead of shape as such,” Kaprow observes, Pollock leaves behind “a track left by a concatenation of sheer energy. The trouble is also due to the vivid fact that the energy is human, made by a weaving body, with arms swinging in fierce delirium.” Although the phrase “in fierce delirium” is somewhat exaggerated, Kaprow’s assertion that the energy retraceable in Pollock’s canvases qualifies as human energy, and is thus inescapably tied to the dimensions of a human body, hints at the potential existence of constraints in Pollock’s process. Indeed, even if the poured paintings—omitting, for the sake of argument, a small number of exceptions—reveal no visual references to human figures, the tracings and loops in Pollock’s abstractions were made by, and hence conform to, the dimensions of a human body: his own. Since he used common trowels, sticks, or dried-out brushes, Pollock could obviously carry limited amounts of paint on such small implements. And since he was pouring without mechanical assistance of any kind, he was equally curtailed by his arm span and body size. Undeniably, therefore, Pollock’s characteristic whiplash curves could only be created within a circumscribed compass. And by recording the range and kinetic energy of Pollock’s motion in space, these linear trajectories thus provide a sense of human scale from within the works, even if no representational references to a human body are discernible. This is not an observation that could be made, say, of Ad Reinhardt’s hard-edged work (fig. 2), although his patterns, as Greenberg would have it, prove no less allover, no less “infinitely repeatable.”

The human scale of Pollock’s poured skeins not only differentiates his patterns from Reinhardt or Pousette-Dart’s; it also belies the
possibility of infinite expandability mentioned above. As Pollock was pouring paint, he was bound, as just noted, by his body’s proportions, explaining why circular arcs with radii extending beyond an arm length, or disproportionately large curvilinear forms, are seldom found in his paintings. As Victoria Newhouse observed: “Pollock’s scale is the arc of his reach.”20 He was also bound by the physical limitations that constrict human locomotion, not to mention the need to reload the brush periodically as pigment ran out. In short, the extent and shape of Pollock’s lines were restricted by the actual physical length and span of his arms as well as by the inherent limitations of human motor skills.

Whilst pouring, moreover, Pollock enlisted—and was per force required to accommodate—a natural process in the act of painting: namely, the free fall of liquid under gravity. And since “naturalness,” as will be argued below, was a defining characteristic of his technique, any discussion of how and why this quality is manifest in his work requires the term to be clarified at the outset. The word “natural” will be used here to denote processes and phenomena “existing in, or produced by, nature” or “conforming to the ordinary course of nature.”21 This includes both Pollock’s biologically determined range of motion and the fluid dynamics of the paint flowing along the stick and accelerating towards the canvas. A process analogous to Michelangelo’s painting of the Sistine ceiling, to take a contrasting example, whereby the artist worked lying down, or, at the other end of the spectrum, one analogous to Max Ernst’s, as he fastened a perforated can above his painting Young Man Intrigued by the Flight of a Non-Euclidean Fly (fig. 4), allowing it to swing freely like a pendulum, will qualify, in this sense, as less natural. In the first case, Michelangelo was nearly immobilized, unable to exercise his usual range of motion, and forced to apply pigment in an uncomfortable position: one where the paint would actually fall away from the surface to be covered. In the second, Ernst was admittedly employing one of the forces of nature, but his use of a mechanical contraption made the whole process somewhat artificial and contrived. In counter distinction, by adapting his intentions and work habits to the physics of pouring, Pollock imbued his art with something fundamentally natural, introducing, as T.J. Clark put it, a certain “literalness, a return to the world.”22

IV Outer Boundaries

It is one thing to appreciate how the marks in Pollock’s poured abstractions are tied to the dimensions of a human body, quite another to investigate the extent to which these dimensions curtailed the overall size of his paintings. Even if physical limitations restricted the morphology and scope of Pollock’s gestures, there was ostensibly little to prevent him, as Kaprow and others have suggested, from expanding his patterns indeﬁnitely. If we concede the idea, however, that Pollock accepted the physical constraints circumscribing the size and conﬁguration of his strokes, it stands to reason that he also accepted constraints circumscribing the overall size of his works.

Because Pollock’s technique required him to reach over the entirety of the picture plane without stepping inside it, the two dimensions of his rectangular canvas could not both be made arbitrarily large. To grasp this point, our readers must be asked to engage in a thought experiment, or in a little physical exercise. First, they should imagine standing, as Pollock did, at the edge of a canvas lying on the floor. When stretching towards its interior, the extent of their reach will obviously depend on their height and arm length. As they will discover (and as the authors have determined for themselves), this distance comes to slightly under half of their height with outstretched arms. In Pollock’s case, since he was just under six feet tall, this range works out to be about 4 feet. Doubling this distance in order to account for the possibility of attacking the canvas from two opposite sides, and allowing for the flight of the paint to extend his reach slightly, establishes the maximum length for one of the two dimensions of Pollock’s paintings at approximately nine feet. That dimension, incidentally, may turn out to be either height or width, depending on how Pollock decided to hang the canvas (as Lee Krasner observed, when Pollock was working on the floor, there was “no top or bottom”).23 This suggests, practically speaking, that no Pollock painting could have significantly exceeded nine feet in both height and width. Sure enough, even the largest paintings in the Pollockian canon—e.g., One (8 feet 9 7/8 inches × 17 feet 5 1/2 inches; 268.8 cm × 530.5 cm), Autumn Rhythm (8 feet 10 1/2 inches × 17 feet 8 inches; 270.5
cm × 538.4 cm), or *Number 32, 1950* (8 feet 10 inches × 15 feet; 269 cm × 457.5 cm)—fall within this boundary. Pollock, as is well known, did occasionally step inside his work (fig. 5), but, by his own account, this was a measure to which he seldom resorted.54 If both dimensions of the canvas grew much beyond nine feet, Pollock clearly have begun to experience the need to step into his paintings on a regular basis. His apparent reluctance to cross this line indicates that, when working on large scales, he felt compelled to respect a tangible boundary beyond which the poured technique would begin to present serious procedural challenges.

The artist, of course, could have overcome these challenges had he resolved to do so. His studio, it should be noted, measured approximately 21 feet by 21 feet. Although the width of Pollock’s largest works fit with just a few feet to spare, he could have as much as doubled their height (and painted with a longer implement). As Lee Krasner recalled, Pollock “would order remnants, bolts of canvas anywhere from five to nine feet high, having maybe fifty or a hundred yards left on them—commercial duck, used for ships and upholstery, from John Boyle down on Duane Street.”25 Since he was ordering remnants rather than employing a standard canvas size, and from a commercial rather than an art supplier, he could easily have extended his paintings’ height. That none measure above nine feet, however, attests to his acceptance, if only tacit, of that limit.26

If Pollock encountered physical boundaries curtailing one dimension,27 did he encounter any curtailing the other? It could be said, of course, that the very size of Pollock’s studio restricted the width of his canvases to their already longest recorded size of about eighteen feet. Yet it is hard to imagine such a radical artist conforming to external rather than self-imposed, or to artificial rather than natural, limitations. Had he decided to extend the width of a painting, he could have conceivably folded over its completed portion and rolled out more canvas as the need arose.28 If this proved too cumbersome a procedure, Pollock could have left the spatial confines of the studio altogether and painted outdoors, as he did during the shooting of Hans Namuth’s film.29 No doubt, Pollock would have devised any number of ways to expand the width of his canvases if he were indeed determined to do so.30

But would such measures have jeopardized key aspects of his working process? The majority of Pollock’s poured abstractions, it should be noted, display a remarkable diversity of strokes and marks. Sometimes the paint is densely layered, even casting shadows on the surface of the work; sometimes it is so highly diluted as to stain and be absorbed into the very weave of the canvas itself; some parts of a work may be highly congested, others can betray a relative paucity of incident; some lines are wide, others thin; some areas may be linear, others may be marbleized.31 Frequently, Pollock even added foreign matter, including sand, glass, and the occasional cigarette-butt on the surface of his work.

Even so, Pollock’s desire to exploit such pictorial diversity was tempered by another: to avoid a dominant visual center of attention. This dual requirement forced him to strike a delicate balance. While exploiting the full range of effects made possible by his technique, Pollock had to be especially careful to prevent any part of the painting from commanding too much visual interest. But because he made no preliminary sketches, and because the exact results of his technique could not be completely anticipated in advance, he forfeited the option of working uninterrupted on an individual sector while ignoring its impact on the composition as a whole.32 On the contrary, he had to gauge continuously how the pictorial and color accents in one area were being counterbalanced by accents already created on another; otherwise, a painting would appear lopsided, asymmetrical, out of balance. This exigency, arguably, made it imperative for him to oversee the canvas in its entirety as he worked. Which, of course, brings us back to the issue of scale. Had his patterns, in fact, been the result of simple repetition, Pollock could easily have expanded the width of his paintings indefinitely; and, had his application of paint been so regular as to be predictable (as opposed to improvisational), he could easily have conjured a mental image of the completed picture in his imagination. Pollock’s way of working precluded either of these two possibilities.

The aesthetic demand of maintaining allover composition, therefore, would, in effect, have curtailed the width of Pollock’s work, but in a way that points to a cognitive rather than a physical constraint—a constraint connected to the artist’s perceptual field. A rough estimate of its range, based on the maximum angle of human peripheral vision, suggests that his paintings could not have grown much beyond twenty feet.33 An estimation of this kind, of course, is bound to be rather approximate; especially as cognitive constraints in general, and those under which Pollock operated in particular—subject to his individual visual acuity and powers of memory, among other factors—are difficult to quantify. But the problem could perhaps be resolved if the question were inverted: instead of delineating “working space” from cognitive constraints, cognitive constraints could be delineated from “working space.” When the very distribution of sizes in the Pollockian canon (the breakdown of paintings according to their size) is taken into account, the presence—and location—of a “cognitive limit” become clearly apparent. As illustrated in the histogram of canvas sizes (fig. 6), only *Summertime* (JPCR: 205) reaches eighteen feet, and only six out of 202 poured paintings from 1947 through 1956 measure above twelve.
While Pollock may have been tempted to paint canvases as large as his studio allowed, the actual distribution signals that such works would have grown too wide to be easily held within the artist’s perceptual field. In fact, he was known to have tackled some of his unfinished paintings on the wall, or else to have climbed atop ladders, to help him evaluate their effect from a more advantageous perspective. Studying a work in progress would hardly have been objectionable, of course, even to an artist who prized spontaneity and improvisation as much as Pollock. Occurring too frequently, however, such disruptive interruptions would have rendered his entire creative process awkward at best, and untenable at worst.

Undeniably, many Pollocks display such explosive dynamism that spectators often describe them as threatening to break beyond their literal borders; by the same token, Pollock’s desire to keep the dimensions of his paintings manageable required him, if only unconsciously, to work within two separate kinds of spatial constraints (it was perhaps to the very discrepancy between visual effect and literal size that Pollock alluded when he described his work as having “no limits, just edges”). While one constraint may have been physical, and the other cognitive, one objective and the other subjective, both stemmed, arguably, from Pollock’s desire to keep his art from becoming unwieldy and overbearing.

Indeed, as a consequence of respecting a limit on the height of his work, Pollock ensured that the top of even his tallest paintings would not lie far above the reach of the average person. And by respecting a limit on width, Pollock ensured that, even as one stands at one end of a large canvas, the other end is still visible, and the center of the work but a step or two away. Conforming to these constraints, Pollock imbued his works with a palpable sense of human scale, and, in the spirit of the very naturalness he was espousing, it would have been perfectly consistent for him to accept these boundaries voluntarily, even happily. In effect, Mark Rothko’s statement cited above—that his canvases, though large, were nonetheless intended to be “intimate and human”—applies just as poignantly to Pollock. The artist’s use of expressions such as feeling “at ease” and feeling “at home” reveals his unwillingness to overstep certain boundaries—not because he was timid or lax, but because doing so would have violated the confines of his (all-too-human) “comfort zone.” In the end, this comfort zone did not so much set up the barriers of the possible; it identified the threshold beyond which the natural, human component that was obviously so important to him could no longer be maintained.

V Inner Boundaries

If Pollock sought to test how large his paintings could span, it makes perfect sense that he would also test how small (fig. 7); as T.J. Clark put it, “both dimensions counted.” But the inner limit may be more elusive. Even as physical limitations may preclude
artists from working on a grand scale without a degree of technical assistance, nothing prevents them (as the work of many a Medieval manuscript illuminator attests) from working on diminutive surfaces. As far as Pollock is concerned, however, it quickly becomes apparent that the physics of pouring required him to face significant impediments at the lower, no less than at the upper, end of the scale. Pollock’s instruments, sticks or trowels, for example, could not be so large as to prove uncomfortable to wield, but large enough to bear enough paint for the pouring process to proceed; a brush with a single hair, as the van Eycks were reputed to have used (or excessively long brushes, as employed by Monet and Velázquez), would obviously not fit the bill. In fact, the fluid properties of the paint, such as its viscosity and surface tension, would themselves have limited the thinnest lines Pollock produced, especially as he wanted the paint to flow uninterruptedly, not drip into a concatenation of individual beads. Even as he allowed numerous droplets to fall on his canvases (by design, for decorative purposes, or, by accident, as dribbles detached from the flow), Pollock still had to employ an implement that, at a minimum, was wide enough to dispense pigment in a continuous stream.

Pollock’s use of pouring, moreover, required enough room for him to work with the panache to which he had become accustomed. Inevitably, he would reach a point where working on too small a scale would force him beyond his comfort zone. If the dimensions of a painting became too small, Pollock’s arm movements would propel most of the fluid pigment outside its borders. Pollock could have restricted his motions to simply flexing his wrist, but it is safe to assume that he would have been unwilling to forego the use of the sweeping gestures made possible, at the very least, by moving his forearm back and forth. Intriguingly, just as the height of Pollock’s largest paintings do not far exceed the reach of a person of average height, the size of the smallest ones loosely corresponds to the area covered by the movement of a forearm to and fro. Even at that diminutive scale, a painting’s dimensions could accommodate the breadth of Pollock’s gestures—within a considerably narrower compass, to be sure, than those employed on the larger canvases, but one still broad enough for Pollock to create a diversity of effects. If his canvases became smaller still, so small as to prevent him from using the sweep of his arm, he would invariably forfeit the possibility of deploying his characteristically rapid trajectories. In that case, his smaller paintings would run the risk of simply resembling details from larger works seen at close range—which could be said, arguably, of Poured Black Shape II of c. 1950 (JPCC: 294) which measures 5 1/2 × 6 3/4 inches (14 × 17.1 cm)—rather than fully resolved paintings in their own right.

As Frank O’Hara already observed, Pollock achieved his most conspicuous signature effect—the evocation of vivid sensations of acceleration and deceleration—simply by dint of thinning or thickening the width of his linear tracks. These sensations are a construct of the beholder’s share, and, given that paintings are static rather than kinetic entities, they obviously do not describe inherent aspects of any work. Even so, these illusions enable spectators to perceive a stationary canvas as experientially dynamic by encouraging them to reconstruct, in their imagination, the kind of movements Pollock must have executed. Yet it is obvious that, to attenuate and extenuate his lines, Pollock would have required a relatively wide area over which to accelerate and decelerate his movements. To work in an area so small as to inhibit this inclination would surely have been uncomfortable for him, providing a warning sign that he was trespassing the inner boundaries of his comfort zone.

But Pollock’s extensive experience with the behavior of liquid paint in less restrictive environments allowed him to develop a repertoire of gestures and to anticipate what some of their effects might be. It has yet to be mentioned in the art historical literature, for example, that since the pigment accelerates as it falls under the pull of gravity—causing the stream to narrow—Pollock could have attenuated his lines either by accelerating his lateral motion or by maintaining uniform lateral speed but momentarily raising his hand. In addition, working on a smaller surface (and, of necessity, predominantly at closer range), he would have been likely to carry less pigment on his implement, thereby producing a thinner stream and allowing it to run-out earlier. In these ways, Pollock could have obtained effects of acceleration and deceleration without actually moving at a faster or slower pace, thus retaining a degree of control that high acceleration might put at risk. As a result, even if working on smaller scales presented certain obstacles, adjustments this slight could still permit the artist to endow smaller paintings with a measure of pictorial richness on a par with his other works.
Pollock’s adherence to the principles of allover composition, moreover—and fostering a sense of visual self-containment via the effect, even if understated, of margins—differentiates the smaller pieces from details of larger ones. Of course, certain exceptions to this assertion may be found. Works such as Small Black Shape (JPCR: 294) are anomalous insofar as they avoid allover composition. In many ways, they look atypical: dissonant, incomplete—even awkward. But it is possible that such pieces were purely experimental or simply left unfinished, perhaps attempts to test how the paint would behave under various conditions, rather than bona fide aesthetic statements in their own right. For Pollock to have considered them fully resolved, even small paintings, presumably, had to display a multiplicity of effects and somehow manifest that sense of balance and equilibrium the artist himself called an “easy give and take.”

But, if fully resolved smaller paintings do not resemble details from larger works, they do not resemble reduced versions of large canvases either. Because a poured liquid must attain a minimum width to maintain physical cohesion, Pollock simply could not have used the poured technique to create lines as thin as may appear, say, in a five by nine inch photographic reproduction of One (fig. 8). At that size, a mechanically reduced version of a large abstraction would simply betray detail too fine for Pollock to have created, at least by pouring from an instrument such as a stick or trowel. Conversely, if a smaller Pollock canvas, or even a twelve by sixteen inch Matter Painting, such asUntitled no. 9 (fig. 9), were magnified to the scale of One (i.e., 8 feet 9 7/8 inches × 17 feet 5 1/2 inches), then the resulting lines would prove too thick to have been obtained the same way. This is a salient point to consider, especially as it explains how unreasonable it would be to expect smaller poured paintings to resemble canvases such as One, Autumn Rhythm, or Number 32 in miniature.

Moreover, just as Pollock encountered physical and cognitive constraints at the upper end of his dimensional range, he was likely to have encountered both at the lower end as well. In the statement cited at the outset, after all, he declared that he “felt more at ease,” “more at home in a big area.” And since Pollock never thought of his abstractions as “art for art’s sake,” or as pure form devoid of “deeper meanings,” it is difficult to imagine these remarks referring exclusively to technical limitations. Lee Krasner, in fact, once made the point that “Jackson’s work is full of the West. That’s what gives it that feeling of spaciousness.”

“[A]fter living in Springs for six years,” she said in another interview, “I think he would have given just as much emphasis to this Eastern Long Island landscape—and seascape. They were part of his consciousness: the horizontality he speaks of, and the sense of endless space, and the freedom...” Against this background, the epigraph may be expressing Pollock’s own intuitive awareness of his creative process operating within cognitive as much as physical boundaries; and, more specifically, of his works having to attain a certain minimum size in order to function as successful “equivalents” for the “spaciousness,” “endlessness,” or “freedom” of the natural environment. A painting the dimensions of a postcard, for example, would hardly exert a sufficiently powerful cognitive impact to trigger such metaphorical projections. Indeed, when viewed from a comfortable distance, say 20 inches or so, such a diminutive image will fill but a small part of our visual field, a fragment of our entire optical experience. Since, as George Lakoff has argued, we tend to construe our visual fields as “a container,” then, analogously, if that “container” proves too restrictive, so will the range of meanings it is able to convey. If Pollock came to similar conclusions, it would mean that he encountered a cognitive limit at the lower as much as at the upper end of his repertoire. But he would hardly have been the only Abstract

Fig. 8. Installation of Pollock’s Exhibition at Betty Parsons Gallery, 1950. One (1950) is visible in the background. Photo: Hans Namuth. Courtesy Center for Creative Photography, University of Arizona ©1991 Hans Namuth Estate

Fig. 9. Untitled no. 9. Gum and acrylic emulsion on paperboard, 12 × 16 in. Private Collection
Expressionist to grasp the implications of encountering such a limit. “To paint a small picture,” Mark Rothko once declared, “is to place yourself outside your experience, to look upon an experience as a stereopticon view or with a reducing glass. However you paint the large picture, you are in it.”

VI Order and Chaos

After “mapping” the inner and outer boundaries of Pollock’s dimensional range, it remains to investigate the role size and scale play in the intricate patterns manifest within those boundaries. In this endeavor, art historians will derive, perhaps unexpectedly, considerable assistance from a new branch of physics called Chaos Theory. Coming upon the terms “chaos” or “chaotic,” the reader should not assume that contemporary physicists’ employment of the word is at all comparable to Bruno Alforti’s when he published his damaging review of Pollock’s work in 1950. On the contrary, present-day physicists, far from using “chaotic” to censure what is formless, confused, or devoid of any structure, employ the term to describe the subtle, hidden order that underlies aperiodic motion and the apparently irregular forms of both the natural world and certain geometrical constructs. The phrases “order in chaos,” “deterministic chaos,” and “regular irregularity,” have become widely-used shorthands for this idea.

That said, are there any connections to be drawn between Pollock’s work and chaotic processes? And, no less significantly, are there reasons why Pollock’s work would reveal characteristics similar to those found in certain natural configurations and mathematical structures? To answer these questions, one first needs to reference the recently-developed methodology of Chaos Theory and some of its central concepts. Over the last thirty years, physicists and mathematicians have studied complex nonlinear processes and their resulting patterns: objects of high complexity and intricacy now called fractals. The term not only designates purely mathematical constructs; it also characterizes the unpredictable behavior of some (even deceptively simple) mechanical systems. Roughly speaking, a structure is deemed fractal if it displays progressively finer detail, similar features at increasing magnifications, and unusual geometrical complexity. Fractal structures can be classified according to their fractal dimension, essentially a measure of the density of a given pattern at various scales, and, at the same time, an indication of its underlying order. For a fractal pattern on a plane, the measurement of its dimension will be a fraction larger than 1 (the dimension of a simple line) and smaller than 2 (the dimension of an entire plane).

A more precise definition of fractals, fractal dimension, and, more broadly, a discussion of the methods used to uncover order in chaotic patterns, would entail too much of a digression; as would engaging the recent debate about the legitimacy of discerning fractals in empirical (as opposed to mathematical) structures. These issues are discussed in a separate essay contained in this volume (“Abstract Expressionism and Fractal Geometry”). To address the question of scale and compositional intricacy in Pollock’s abstractions, it is nonetheless necessary to make the following three points. First, only mathematical algorithms generate perfect fractals, but structures displaying fractal characteristics have been detected in many natural forms and phenomena. Common examples are: rivers with decreasing tributaries, streams, and rivulets; vascular networks with ever-smaller arteries, veins, and capillaries; or lightning with ever-finer flashes, branches, and sparks. Second, patterns approximating fractals arise in phenomena where the dynamic evolution of a system is governed by a few simple and predictable processes (or rules) but is also impacted by arbitrary (or random) influences or conditions. This applies to how lightning bolts strike, in accordance with the laws of physics (electricity and magnetism), but also responding to external (or “initial”) conditions; in this case, spatial and temporal variations in the humidity, temperature, and electrical conductivity of the air. Third, fractals are a manifestation of an underlying, hidden “scaling order” in a complex pattern, an order revealed only when that pattern is subjected to computational analysis. Fractals, admittedly, are just one of many possible kinds of scaling regularity (see “Abstract Expressionism and Fractal Geometry”), but, as the most elegantly simple geometrical structures, they may be taken for the prototypical scaling regularity.

By now, computer scientists routinely generate fractal structures and discern similar characteristics in nature and art: photographs of snowflakes and ferns, Japanese woodcuts by Katsushika Hokusai, and Leonardo’s Deluge drawings have become standard examples of structures displaying some fractal properties. Despite this broad interest, however, scientists largely overlooked Pollock’s allower patterns. But, because the poured technique was contingent upon the predictability of the motion of liquid paint under gravity, and also incorporated aspects of chaotic flow, Richard Taylor, a condensed matter physicist, came upon the idea in 1994 of investigating the intricate geometry of Pollock’s works. Employing a technique devised to study photographs of fractal patterns in nature, Taylor and his collaborators analyzed some twenty works created between 1944 and 1952 and reported that—up to a point—these paintings do, in fact, have a fractal structure, providing compelling evidence that Pollock’s way of painting did indeed incorporate chaotic dynamics. Taylor and his collaborators, moreover, also purported that a number of the
poured abstractions are so complex as to have not only one, but two separately discernable fractal dimensions. They explained this finding by noting that the artist’s process actually combined two distinct sub-processes—the instability of the falling stream of paint and the spontaneous motions of his body—and that, since both sub-processes incorporated a certain degree of chaos, each would produce a distinct fractal structure.

The legitimacy of this claim notwithstanding (see “Abstract Expressionism and Fractal Geometry” in this volume), it is clear that both of these separate physical processes contributed to the complexity and improvisational character of Pollock’s abstractions. During the act of pouring, after all, the slight variations in the amount of pigment released and the instabilities of the flow (depending on viscosity and density) introduced chaotic fluctuations. At the same time, the spontaneity of Pollock’s own gestures as he moved around the canvas imbued the process with a second kind of unpredictability. As one might expect, these two perturbative mechanisms, though not entirely separable, operated largely at two different scales. The smaller scale, connected to the fluid instabilities of poured paint, extends roughly from a quarter of a millimeter (the thinnest lines in Pollock’s repertoire) to a few centimeters. The larger scale, connected to the improvisational character of Pollock’s arm movements, extends from a few centimeters up to the size of the canvas as a whole. This is not to say that the resulting geometrical structures occupy separate segments of the canvas: since Pollock’s arm movements guide, and fluid instabilities affect, the flow of paint at every turn, the two coexist over the surface of the entire painting. Even so, the complexities built up at the smaller scale (up to 5 centimeters) owe their existence predominantly to the fluid instabilities, while those at the larger scale owe theirs predominantly to the sweep of Pollock’s bodily movements.

In its own right, the above discussion of the physical aspects of pouring reveals something crucial about the idiosyncrasies of Pollock’s process. But it also provides a new language—and a new set of analytical tools—to extend the present inquiry into the boundaries of Pollock’s technique. Even if the fractal nature of Pollock’s canvases is a matter of some contention, the interplay of the two perturbative mechanisms suggests that his abstractions may very well exhibit some, albeit not necessarily fractal, form of scaling regularity. Indeed, our preliminary analysis, performed with David Martin, a computer scientist, points in this very direction (see “Abstract Expressionism and Fractal Geometry”). The existence of a scaling order in many of his abstractions would, for one, buttress the hypothesis that the artist must have encountered cognitive constraints when working on large scales. As E. A. Carmean, Jr. has observed, Pollock’s abstractions often “began with the artist applying a black pattern” to function as “the initial base.” For his part, Taylor also argued that Pollock frequently established the dominant fractal structure of his canvases by means of an initial, black “anchor layer.” Once in place, this layer determined the large-scale “order” of the painting; it established a dominant “theme,” as it were, upon which subsequent layers functioned as “variations.” By remaining “faithful” to this anchor layer, or, more precisely, by monitoring and maintaining a uniform degree of complexity throughout the canvas, Pollock was, in effect, fostering the scaling order and, simultaneously, refining the “successor” effect of his abstractions. And since doing so required him to survey the canvas in its entirety as he worked, it follows that the size of his paintings had to be curtailed accordingly.

Turning to the other extreme of Pollock’s dimensional range, the scaling complexity of his larger paintings raises the issue of its role in smaller pieces. An argument may be advanced that the size of Pollock’s smallest works (and of the diminutive Matter Paintings) meets the minimum space “requirements” for both perturbative mechanisms described above to play out, and thus for patterns of considerable intricacy to emerge. To create such intricate effects, Pollock, first of all, required enough space to accommodate both the small scale structures due to fluid instabilities and the separate larger scale patterns created by the artist’s wrist and arm movements. If the artist reduced his paintings in size, the larger scale patterns would be proportionally squeezed; if he reduced the size beyond a certain point, those large-scale patterns would begin to lose their separate identity, or, to put it differently, become difficult to differentiate from the small-scale structures. Given that the characteristic size of these small scale structures is about 1-3 centimeters, a painting—in order to accommodate both effects—must be, at a minimum, one order of magnitude (i.e., ten times) longer, or about 20 centimeters long. Not surprisingly, few Pollocks fall below that range. All the same, this does not mean the presence of both effects will necessarily accommodate fractals within such a circumscribed space. As Katherine Jones-Smith and Earsh Mathur recently pointed out, the dimensions of even Pollock’s larger canvases may be too confined to accommodate the kind of bona fide scaling regularities required of double fractals.

Regardless, the interplay of the two distinct perturbative mechanisms in Pollock’s process may shed light on a rather singular aspect of the poured abstractions: namely, that an approximate sense of their scale can often be inferred simply from a photographic reproduction. Photographs are deceptive, of course, insofar as they can reduce or magnify both large and small paintings to the same dimensions. But facsimiles of Pollock paintings (and even of paintings created in a distinctly Pollockian manner) may yet provide a self-referential sense of scale. Since his aesthetic
vocabulary was primarily linear—as Bannard observed, Pollock’s technique “is useless for filling in and perfect for forming a quick, long line”—and because he was pouring using sticks or trowels, Pollock’s lines ranged from about a quarter of a millimeter to about six centimeters. It was the artist’s propensity, moreover, to exploit as much of this entire range as was aesthetically viable for each individual piece. One may speculate that an observer familiar with a broad selection of Pollock’s paintings will eventually become accustomed, if only subliminally, to the way the two effects described above determined the range of his linear vocabulary. Under extreme magnification or reduction, however, this range will be conspicuously shifted, so much so that the thickest lines might exceed one’s expectations about maximum width, or the thinnest lines become nearly imperceptible. For a trained eye, in effect, enlarged reproductions of small paintings (when projected on a screen, for example) will reveal a surprising absence of fine detail, whereas reduced versions of large paintings will reveal an unexpected preponderance of it.

Comparing reproductions of One and of Untitled no. 9 (figs. 8 and 9), if both photographs are nearly the same size, will illustrate this point far more persuasively than any further elaboration. This does not mean, of course, that an observer will be able to predict the actual size of a poured painting on the basis of a photograph. What it does mean is that, by virtue of his process alone—its dependence on human scale, in particular—the artist made it possible, serendipitously, for an informed audience to intuit the approximate dimensions of his works from a reproduction. This observation does not universally apply to artists employing allover composition; one cannot, for example, deduce the scale of a painting by Reinhardt or Torres-García from a photograph. Nor would it apply to other artists who employed a variation of his pouring technique. Had Pollock’s morphology been less dependent on linear elements—he had employed other topological shapes (such as those found in the works of, say, Helen Frankenthaler or Morris Louis (fig. 10))—his public’s ability to infer the approximate size of his works on the basis of a reproduction would also be severely mitigated, if not curtailed altogether.

Admittedly, Pollock did employ marks other than linear tracks in his work (stains, clusters, and puddles of pigment often occur in abundance). In the vast majority of cases, however, he included enough poured lines to provide the spectator with a rough sense of scale.

But the implications of Pollock’s idiosyncratic way of deploying paint go well beyond the visual characteristics of his work. That the poured technique incorporates aspects of chaotic flow—creating patterns that are ordered and structured, but whose regularity becomes fully apparent only upon applying the tools of fractal analysis—also undermines attempts to construe Pollock’s work as the repetition of identical elements from one end of the canvas to the other. Such a narrowly mechanistic interpretation does no justice to the subtlety and complexity in, let alone the human measure of, Pollock’s abstractions.

VII Nature and Convention

The newly-found paintings in Matter’s collection and others recently published—which, by happenstance, would lie at the small end of Pollock’s dimensional range if accepted as genuine—have thus invited new questions concerning the role of scale, compositional complexity, and affinities to nature in his paintings in general. To be sure, that the exigencies of Pollock’s process constrained the scale of his work at both ends of his dimensional range may, in hindsight, seem all-too-obvious an argument to make. Even so, art historians have yet to delineate the boundaries of Pollock’s comfort zone. And even if the limits of this zone cannot be precisely pinpointed or quantified, the very notion that this artist chose to operate within limits at all, and within these kinds of limits in particular, has implications that are far from trivial. At the very least, accounting for the parameters of Pollock’s working space loosens the bond frequently made in the literature between size and composition, and tightens the one between size and technique. In addition, this exercise reveals the degree to which Pollock’s modus operandi actually respected certain tangible physical and cognitive constraints. Clearly, Pollock sought to explore the options afforded by his technique over a wide range of formats and sizes. In terms of surface area, his paintings span from approximately 40 inches square to 20,000 inches square. Yet, even though the spectrum of Pollock’s work could hardly be construed as narrow, he seldom pushed beyond the threshold within which his process could be effectively deployed. He may never have admitted to operating within limits; but guided by a need to feel “at home” and “at ease,” and by an intuitive sense of what was natural, he rarely transgressed the bounds of his comfort zone.
In the same way, the intricate complexity of Pollock’s abstractions does not mean that he was working under an oppressive set of constraints. Although maintaining scaling regularity required Pollock to meet a rather narrowly-defined set of conditions, he nonetheless enjoyed remarkable stylistic latitude. To be sure, he restricted his visual vocabulary primarily to linear elements. But simply by incorporating chaotic dynamics in his painting process, allowing the widths and shapes of his lines to vary widely, and adhering to the demands of all-over composition, Pollock was already creating conditions conducive to the emergence of patterns akin to fractals. Generating ordered structures of this kind, therefore, neither placed additional demands upon him nor thwarted his creativity; it was a direct consequence of his very technique and compositional strategy. Indeed, Pollock’s production is remarkably diverse not only in its size, but also in the range of styles employed and the effects achieved. In this, too, his work reveals an affinity with nature; for, as Montaigne has remarked, “the most general style followed by Nature is variety.”

The discovery of scaling regularities in Pollock’s patterns provides, in addition, a powerful indication that his work, both in terms of its technique and ethos, is reflective of the underlying order of the physical world. It is now so common to describe natural phenomena in terms of fractal geometry that some physicists even refer to fractals as the “fingertips of nature.” Having died years before fractal geometry was invented, Pollock knew nothing of this connection. But there is compelling evidence, as several statements from Lee Krasner cited above indicate, that he intended his work to evoke some aspects of the natural world. Pollock’s friend, the sculptor and architect Tony Smith, concurred: “I don’t think that Jackson painted on the floor just for its hard surface, or for the large area, or the freedom of movement, or so that the drips wouldn’t run. There was something else, a strong bond with the elements. The earth was always there.”

The scaling properties of Pollock’s abstractions, moreover, provide another compelling indication that “naturalness” played a crucial role in his choice of size, structure, and technique. And, even if physical attributes such as size, pattern density, and discernible scaling property do point to quantifiable characteristics of his particular mode of deploying pigment, they open a window on salient aspects of the artist’s approach, and, ultimately, upon the very meaning of his work. On this account, a basic consideration of the physical processes Pollock employed, and of their cognitive implications, only reinforces the depth of the connection between his art and nature. What makes Pollock’s art singular, after all, is not his concern with or even metaphorical evocation of nature, but the extent to which he relied on chaotic dynamics—the two pertur-


5. See *Untitled* (c. 1949), Oil and enamel on canvas mounted on masonite, 45.8 x 53.3 cm, Private Collection, and *Untitled* (c. 1949), Oil, enamel and aluminum paint on masonite mounted on wood, 38.1 x 72.4 cm, Private Collection. Both works illustrated in *Jackson Pollock* (Cologne: Taschen Portfolio, 2006), n.p.


9. When asked by Jeffrey Wechsler whether we remember Pollock’s larger paintings because they are big or because they are better, Irving Sandler replied: “Personally, I think they are better.” Irving Sandler and Sam Hunter, *A Discussion on Abstract Expressionism and Small Scale Painterly Abstraction*, with Jeffrey Wechsler, *Abstract Expressionism: Other Dimensions*, 76.


16. See, for example, Eric Lom, “Pollock’s Promise: Toward an Abstract Expressionist Architecture,” *Assemblage* 39 (August 1999): 65, and Peter Blake *No Place Like Utopia: Modern Architecture and the Company We Kept* (New York: Alfred A. Knopf, 1993) 114; the museum, incidentally, was never built and remained in the form of a model. Pollock, however, did keep the model in his studio.

17. Rouche 16.


24. In fact, the observation has been made that many of Pollock’s abstractions, such as *Autumn Rhythm* and *Number 1A*, are noticeably denser in the lower register. This suggests that although Pollock probably always retained the option of rotating his canvases after their completion in order to determine their best orientation for exhibition purposes, he probably settled on that orientation at some point during the creative process. That his paintings are generally denser at the bottom most likely betrays his attempts to prevent paintings from looking “too heavy.” See also Matthew L. Rohn, *Visual Dynamics in Jackson Pollock’s Abstractions* (Ann Arbor, MI: UMI Research Press, 1987).


26. The only exception to this rule is *Number 2, 1950* (9 feet 5 inches x 3 feet; 287 x 91.4 cm) in the Fogg Museum, Harvard University (JPCR: 261), but note that its width is well under nine feet.
In the case of paintings with one of the sides exceeding the "limit" of nine feet discussed above, we will refer, for the sake of brevity, to the shorter dimension as its "height." It should be noted that several of Pollock's poured paintings are square (e.g., JPCR 2: 275-282), and at least one is perfectly circular (JPCR 2: 208).

By folding the canvas, in fact, Pollock could have dispensed with the constraint discussed earlier. But it would have made his process cumbersome and contrived.

Jackson Pollock, produced by Hans Namuth and Paul Falkenberg. Narration by Jackson Pollock, 1951, 16mm.

As an example of Pollock's attitude: when he was commissioned to paint Mural (JPCR. 102) for Peggy Guggenheim in 1943, he tore down a wall dividing the front and middle rooms in his studio.


Unlike artists who worked with a palette, which could accommodate multiple colors, Pollock, who was pouring paint from a can, would have found it far more inconvenient to alternate rapidly between different color applications. He was therefore far more likely to work throughout the surface than on individual sectors for any length of time.

Taking the maximum angle for comfortable peripheral vision (from one corner to the other) as about 60 degrees, a distance to the center of the canvas of about 8 feet (artist's height of 6 feet plus 2 feet to account for his standing at the edge of the canvas), and allowing for about 40 degrees of his head's rotation from side to side, gives the maximum "observable" length of the canvas as 19 feet.

If his paintings grew too large, their horizontal orientation would cause severe foreshortening, making it difficult for Pollock to gauge how they would look on the wall. Without these "corrective" measures of tacking the canvas on the wall, or standing atop ladders, Pollock might have created, albeit unwittingly, an Abstract Expressionist version of the anamorphic distortion seen, say, in Holbein's famous French Ambassadors at the Tate Gallery, London.


See also Newhouse 142ff.

T.J. Clark 18.

This point, incidentally, underscores how unsuitable the term "drip" proves as a descriptor of Pollock's technique as a whole.

It should be noted that while a thin line could have been obtained by means of a chisel or trowel, a thinner implement would have limited the width of the skeins of paint.


Most probably, Pollock used a combination of these two methods.


Rcué 16.


For Alferi's comments, see O'Connor 55.

Periodic motion, or process, refers to a movement that repeats continuously, with the time interval between repetitions designated as period. A child on a swing, for example, oscillating back and forth, moves in a periodic way (with the period being the time measured for one full swing: the smallest time required for the object to return to its original position). Aperiodic motion is
motion that never repeats exactly, that is, a movement for which the period cannot be determined.


55 Gleick 98.

56 The study of objects of unusual, non-Euclidean geometry by mathematicians actually dates back to the end of nineteenth century.

57 A good example is a double pendulum, a device constructed by attaching the first pendulum to a fixed support and the second pendulum to the end of the first. Double pendulums of this kind, after being set in motion (e.g., displaced from their equilibrium position), execute highly irregular, aperiodic motion, motion that cannot be predicted with any accuracy.

58 Gleick 102.

59 The fractal characteristics referred to here are both visual similarities to mathematical fractals and also statistical similarities revealed only after the patterns are subjected to computer analyses (see “Abstract Expressionism and Fractal Geometry” in this volume).

60 Most famously, Hokusai’s *In the hollows of a wave off the coast of Kanagawa* and Leonardo’s *The Deluge* (Windsor Castle); see Benoît Mandelbrot, *The Fractal Geometry of Nature*, C18 and C2.


62 In a mathematically exact fractal, fine details emerge at arbitrary magnification; in any painting produced manually—as opposed to a computer-generated image—fine detail will eventually disappear in progressive enlargements.


64 See Richard P. Taylor, Adam P. Micolich, and David Jonas, “Fractal Analysis of Pollock’s Drip Paintings” 422; and Richard P. Taylor, Adam P. Micolich, and David Jonas, “Fractal Expressionism,” 27 (this investigation, it should be noted, only analyzed paintings down to 0.8 mm).


66 It should be noted that some of Pollock’s poured abstractions do not appear to be fractal, especially those that either have few “layers,” or those that do not conform to a closet composition.


69 Strictly speaking, only the most prominent features of the large scale fractal would be squeezed by this process.


71 Bannard 63.

72 See *Untitled* (c. 1949), Oil on canvas mounted on masonite, 45.8 × 58.5 cm, Private Collection, and *Untitled* (c. 1949), Oil, enamel and aluminum paint on masonite mounted on wood, 38.1 × 72.4 cm, Private Collection. Both works illustrated in Jackson Pollock (Cologne: Taschen Portfolio, 2006), n.p.


74 The first mathematical fractals, like the Cantor Set and the Koch Curve, were actually constructed about a century ago, but they were not codified as fractals and some of their properties were not understood until the later part of the 20th century.


On this point, it may also be important to cite Steven Naifeh and Gregory Smith, *Jackson Pollock: An American Saga* (New York: Clarkson N. Potter, Inc., 1989) 540: "More than one visitor to the studio noticed that Jackson’s relationship to the canvas was like that of a farmer to his field. The way he stood, the way he looked at the canvas, the way he worked it, always made me think of him like a farmer," says Herbert Matter. The paintings were his rocks, his trees, his earth. Art was his landscape." For another poignant statement by Matter along the same lines see Jeffrey Potter, *To a Violent Grave: An Oral Biography of Jackson Pollock* (New York: G.P. Putnam’s Sons, 1985) 129.

Gleick 107: "*How big is it? How long does it last? These are the most basic questions a scientist can ask about a thing.*"