

Digital Gestures

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My claim in this chapter is that digital poetry, far from attenuating our relation to the human body, actually evokes this body and its kinetic energies in a variety of highly inventive ways. The relation between fingers and font in digital writing might not be as immediate as the relation between hand and symbol that characterizes manual inscription. But this has not stopped poets--forever intrigued by lost immediacy--from sounding all the possibilities of that particular relation as it is manifested, distorted, and re-created in the digital realm. Digital poetry has turned out to be a genre of computer-based writing concerned with recalling to the user's consciousness a memory of the motions required to produce letters manually on a flat support. The motions associated with the use of paper and writing implement return in digital poetry both literally, as small motor movements involving only the fingers and wrist (shifting the mouse, clicking, dragging, and so on),

and figuratively, as replications of letter production acted out on the screen. Whether letters are constructed stroke by stroke by an anonymous program (as in Bill Marsh's "Aria" or Jim Andrew's "Nio") or moved about the screen and made to appear or disappear according to the hand motions of a real-time user (as in John Cayley's "riverIsland," Stephanie Strickland's "Vniverse," or Camille Utterbach's "Rain"),¹ digital poems mime and displace the corporeal energy channeled by the gestures of handwriting. Writing poetry on the computer makes it possible to retrieve aspects of a subject's experience of writing as a corporeal practice that cannot be captured by more traditional print forms.

Arguably, the single most innovative feature of digital poetry is animation. Concrete and visual poets of the past have tried to free letters from linear arrangement and an assigned place within a word.² However, digital works distinguish themselves from these earlier efforts by the increased liberty of movement they accord to both entire semantic units and individual letters. Flash, Director, and DHTML

animation programs extend the visual experience of the verbal construct in ways that earlier works could not; programmers and users can, for instance, move words and letters around the screen, make them flicker, pulse rhythmically, or morph.³ Whether generated by pre-programmed algorithms or initiated in real-time by interactive users, the transformations and transpositions these letters undergo on the screen recall the corporeal energies that drive inscription.⁴ When letters move, morph, or pulse, they expose digital writing's nostalgia for the hand, the producer's creative will to reengage with and express the kinetic impulses of the body.

I therefore intend to approach digital poems as gestural, that is, as alluding to physical movements of the body in space. I am distinguishing my use of the term "gestural" from that of Robert Kendall, who has proposed that animated poems can be divided into two groups: the "gestural" and the "structural." By "gestural," Kendall means that the kinetic features of the text serve "the same function as gestures of body language or the inflections of speech. They provide

emphasis, build tension, or evoke a mood."⁵ Meanwhile, "structural" animations are those which affect "meaning and syntax at the deepest level," not simply emphasizing words, but bringing them in and out of being in a manner that contributes directly to the semantic content of the poem (as in Kendall's "Faith"). While I recognize the validity of Kendall's distinction, I want nonetheless to appropriate the expression "gestural animation" for my own use. Pulling "gesture" in the direction of movement rather than emphasis (which can be achieved by vocal inflection as well), away from rhetoric and toward dance, I hope to restore the choreographic dimension of the word. I am interested here in the gestures, the actual small motor movements, involved in the execution of handwriting and how these gestures/movements are displaced--in what emerges in my analysis as a kind of secondary order of displacement--onto the computer screen. For me, a "gestural" animation corresponds to and evokes the *ductus*, or stroke, of the writing hand; it reinscribes

the movement of the body as it is engaged in the production of individual or connected letters.

I am less interested, then, in the activity of words, sentences, or lexia than in the movements of letters, the traveling, warping, and morphing of characters. It is in these specific types of animations that the gestures of handwriting return in a new form. The *ductus* of the letter is the conduit for corporeal energy; it embodies--in an inscription--the gestures required to form it. In order to make my argument about digital poetry as a gestural form, I will take a detour through the work of two visual artists of the twentieth century, Robert Morris and Cy Twombly, both of whom maintain a significant, if sometimes ironic, relationship to gestural abstraction, an important movement in painting of the 1940s and 50s. While Morris and Twombly cannot be said to "morph" letters--or even move them around the canvas--they do focus attention on the gestural origins of inscription, on handwriting or, more to the point, on proto-writing. Their de-skilling operations are aimed at exposing the kinetic impulses that

underlie the act of inscription, impulses that, when repeated compulsively, threaten to render the inscription itself illegible. My argument is that these same kinetic impulses--disciplined but potentially transgressive--can be seen to motivate the way animation techniques are put to use in digital poetry. Digital poetry is the domain of cybertextuality in which the gestural energies of the body are powerfully evoked through strategies of displacement that, when repeated compulsively, challenge the very semantics of inscription. Thus meaning in digital poetry is both posited and undone through, for instance, the rhythmic pulsating of letters (as in Mez's or Brian Kim Stefans's works),⁶ the morphing of letters over time (as in Diana Slattery's "Glide"), or the dragging of entire words or letters to create entirely new visual languages (as in Jean-Luc Lamarque's "pianographique"). Software that sets the letter free of its positional constraints and allows it to dance on the screen offers digital poets entirely new ways of playing with the visual properties of letters. In sum, the play of

the letter that characterizes the poetic genre as a whole emerges in digital poetry as indexical of a kinetic body that both generates and obscures signification achieved through written signs.

How has the body been approached by theorists of digital writing in the past? Treatments of cybertext's relationship to the body generally make one of three claims (all of which contradict the hypothesis I will explore here). First, in the wake of Donna Haraway's influential "Cyborg Manifesto," scholars of hypertext and digital literature have argued that computer technologies merely dramatize what has always been the case, namely, that there is no purely "natural" or organic body, but rather all bodies produce culture (and themselves) by interfacing with prosthetic devices.⁷ Christopher Keep, for instance, claims that reading and writing hypertext (in particular) are activities that undermine our boundedness as discrete physical bodies and even "refigure our perception of ourselves" (165). According to Keep, our very flesh loses its organic plenitude and becomes

indistinguishable from the pulsating electronic signals extending and traversing it. "Hypertexts inscribe themselves onto the skin of the human as deeply as the human writes itself into the machine," states Keep (174). In a sense, then, even when computer technologies mediate inter-corporeal communication, the body cannot be lost--and it would be a mistake to speak of a "nostalgia" for it--since the computer itself is implicated in producing the very body that such means of communication are supposedly manifesting. Interactive computer technologies, the story goes, encourage us to revel in our dispersed subjectivity, our unbounded physical form, thus allowing us to nip in the bud whatever "nostalgia" for the *sujet unaire* we might still harbor.

The second claim, one that follows from the first, goes something like this: not only is the body produced by its prosthetic extensions, but the body's gestures, its specific form of kinetic instantiation (as well as its desires) achieve a certain phenomenological existence through interaction with

devices such as the computer.⁸ As Marcel Mauss once argued in an entirely different context (he was speaking of cultural inscriptions rather than media inscriptions), the body's gestures are not necessary and natural to it but are learned responses to specific cultural demands. The kinetic body is thus created by the tasks it is called on to perform. Writing about cyberspace, Keep makes a similar point, insisting that the body never springs forth fully realized but is instead shaped and constructed by the gestures that machines impose upon it. Dragging the mouse and lightly tapping the tips of the fingers are gestures that define a new gestural body, one coterminous with a keyboard and screen. Once in dialogue with the machine, not even our desires can be said to be ours alone (or to originate in our libido). Choices made during the process of reading (or interacting) are partially determined by features of the programming; they are not realizations of a unified subject's autonomous and individuated desires.

I don't intend to spend much time taking on these first two claims, except to say that, to my mind, the

argument made for the influence of prosthetic devices on the body, its gestures, and its desires is, in the case of the computer, hugely overstated, given the long history of commerce between human beings and their tools.⁹ It is difficult to see how the computer undermines our discretely embodied subjectivity any more than a telephone does. The body as a unit capable of suffering, as wired by a finite set of nerves to pick up changes in the object world, remains bounded, no matter what device it employs. It is still our wrist that gets cramped, our neck that gets sore, and not the computer's arched frame. The small motor movements the computer requires may eventually become inscribed as unconscious habits; however, these movements also produce conscious sensations in a body that cannot be entirely changed. These visceral, internal sensations of movement, posture, and orientation that come with having a body at all are precisely what the digital poets I study attempt to convey. They seek to capture the quality of what Sally Ann Ness has called "kinetic chaining," movement procedures that feed a mind "exploring its

environment," as Ness puts it, "through something other than its eyes and ears" (5). To be sure, in computer writing, the relation between the body as a sensory apparatus exploring a machine with its fingertips and the actual shapes of the figures that appear on the screen is highly attenuated, mediated to a large extent. (In contrast to handwriting, a process in which the hand mimes the shape of an "R" and, if furnished with the proper implement, simultaneously produces the shape of an "R" on a receptive support.) Yet even the swish of the tiny arrow of the mouse across a flat space of light mirrors in proportion the sweep of the arm as it directs where that arrow is to go. Such mirrorings, or visual reproductions of "kinetic chains," are frequent in the digital poems I analyze here. In fact, the software programs digital poets use provide many opportunities for creating a bond between the writer's visceral experience of tracing letters and the graphic instantiation of this tracing, a bond that is closer, I would argue, than that produced by the technologies of the typewriter or the printing press.

This last point brings me to the third approach to the body offered by recent theorists of digital writing. Scholars such as Mark Poster and Mark Seltzer have made the claim that not only is the body's originary mediation--its otherness to itself--dramatized by computer technologies, but computer technologies *accentuate* that mediation, making palpable the distance between the individual body and the traces it leaves on the page. Poster and Seltzer both insist that computer writing renders less immediate, more attenuated, the contact between the hand and its product, the inscription. Poster, for instance: "Compared to the pen, the typewriter or the printing press, the computer dematerializes the trace. As inputs are made to the computer through the keyboard, pixels of phosphor are illuminated on the screen, pixels that are formed into letters. Since these letters are no more than representations of ASCII codes contained in Random Access Memory, they are alterable practically at the speed of light. The writer encounters his or her words in a form that is evanescent, instantly transformable, in short,

immaterial" (111). Seltzer echoes this view in *Bodies and Machines*, stating that writing with digital instruments "replaces . . . that fantasy of continuous transition [from hand to mark, from body to page] with recalcitrantly visible and material systems of difference; with the standardizing spacing of keys and letters; with the dislocation of where the hands work, where the letters strike and appear, where the eyes look" (10). The significant word in Seltzer's description is of course "fantasy"; handwriting, he notes, appears to fulfill the fantasy of an immediate relation between the body and its form of self-expression, a fantasy that a word processor employing an electronic keyboard cannot even pretend to entertain.

As opposed to Seltzer, I believe that digital writers are obsessed with the fantasy of immediacy *because of* rather than despite the computer's attenuations of contact between touch and type. Further, and somewhat paradoxically, I would maintain that this fantasy of immediacy is retrieved through the very technologies accused of displacing it. What

occurs in certain forms of digital poetry in particular is not the *acceleration* of that "radical decentering of the subject effected by earlier writing technologies" (Keep, 170) but, on the contrary, a recuperation, in another form, of that hand-page contact that was supposedly lost. Finally, one cannot assume that handwriting provides greater intimacy between the body and its inscriptions. Handwriting may provide, for Keep, Poster, and Seltzer, a fantasy of immediacy, but historically handwriting has represented the very opposite, namely, the body's submission to regimes of gestural training that are neither natural nor easily acquired.

In fact, almost all scenes of writing throughout the history of philosophy--those found in Plato, Hegel, Husserl, Foucault, and Derrida are most familiar to me--stress the degree to which human intention and affect are distorted in chirographic cultures (as opposed to oral cultures).¹⁰ According to many, the body that makes contact with the page, the hand that produces the script, has already been disciplined, self-alienated, at once device and limb,

expressive tool and conditioned flesh. As Foucault writes suggestively in *Discipline and Punish*, good handwriting "presupposes a *gymnastics*--a whole routine whose rigorous code invests the body in its entirety, from the points of the feet to the tip of the index finger" (152; emphasis added). Handwriting is a kind of telescoped athletics, a compressed "gymnastics" that is at once tightly constrained and potentially explosive. The acquisition of proper orthography involves a degree of coercion and conditioning, but it also provides a support for the transmission of a bodily energy that might not otherwise find an acceptable cultural outlet.

Melanie Klein, in an essay of 1923 entitled "The Role of School in the Libidinal Development of the Child," goes one step further, emphasizing that this contained energy is not only corporeal but also libidinal in nature and that handwriting, therefore, possesses an erotic dimension. Studying a group of schoolchildren first approaching literacy, Klein observes how they submit themselves to the physical discipline of writing and yet find ways of charging

this writing with the energy of the very body that has--through the behaviors demanded by penmanship--been repressed. Klein's reflections suggest that children invest individual letters not only with personal meanings but also with barely bridled kinetic and libidinal energies. The practice that disciplines the body, Klein advances, becomes the support for the body's expression, that is, for the discharge of a corporeal energy that has been diverted from its "natural" course. Klein narrates stories in which little Fritz, for example, imagines the dotted 'i's to be penises, or in which little Ernst, while learning to perfect the lower case "l," thinks of masturbating as he moves the pen repetitively up and down, up and down. It is worth keeping in mind this rhythmic aspect central to handwriting when we observe works of digital poetry that employ rhythmic devices, such as the regular flashing of letters on the screen or the addition of a light pulse beneath the written character.

Other theorists of orthography less concerned with sexuality per se have also suggested that letters

can serve as the support for a wide variety of expressive investments. Pierre Duborgel, for instance, claims in *Imaginaire et pédagogie* that the first graphemic exercises of the child tend to associate the letters of the alphabet either with faces or with the animals and objects the letters resemble. Typically, during the period when the child is first learning to sketch letters on paper, she does not distinguish between the two activities--drawing and writing--maintained as separate disciplines by the educational academy, and thus, as a result, letters can easily bear iconic value.¹¹ Duborgel's most interesting point, however, is that, ontogenetically and phylogenetically, both letters and depictions are preceded by "griffonages," or seemingly random scribbles. At the origin of writing, then, is "une gesticulation," a gesture, or really a set of motor movements, that Serge Tisseron (another psychologist of early child development) names the "inscriptive gesture." As Tisseron writes, the "genesis of the text, as of any written mark . . . , must be considered from the viewpoint of the original spatial

play which the hand stages" (29). And he adds--tacitly invoking Melanie Klein--"what is at stake in the hand is the very nature of the psychic investments which are bound up in it." All writing, in short, is disciplined corporeal energy; as a corollary, then, writing always involves an originary alienation, a moment of negativity, that is not necessarily exacerbated--but only inflected differently--when new implements, such as the electronic keyboard, are introduced.

Now, it might seem at first that this narrative of writing's grounding in gesture is irrelevant to an account of digital writing, especially of digital *poetry*, which supposedly depends upon the "material effects" of the letter rather than upon the letter's capacity to transmit a libidinal charge.¹² The computer keyboard, one might argue, obviates the need for pressure, for marked bodily investment, and thus computer writing is as far from handwriting--and its gestural disciplines and pleasures--as one can get. However, it is by no means clear that the hand and its "psychic investments" (Tisseron) are forgotten in

computer writing. On the contrary, according to Tisseron, writing on the computer reestablishes our connection with earlier writing practices: "The importance given to hand gestures," he states, "does not exclude the increasingly large share of textual creation which is performed by machines, starting with the home computer. In fact, the current technological evolution is drawing noticeably closer to the conditions presiding over the manual creation of a manuscript" (29-30). It would seem, then, that when using a word-processor, the body rediscovers in a displaced form elements of its kinetic connection to the support (page or screen). Not only does the mouse engage the hand (wrist, arm, and shoulder also play a role), allowing it to draw invisible figures with the cursor (and these figures can be made visible, as we shall see), but the fact that portions of text can be displaced from one spot in a manuscript to another, that simple movements of the fingers can alter fonts, or that letters and words can be dragged, distorted, rotated, or even set spinning--suggests that innovations specific to digital technology have the

unprecedented power to recall, for the eye and the hand, the rhythmic and gestural components of inscription.

It is in this light, I believe, that digital writing must be seen. The conventional genealogy of digital poetry traces it back to movements in concrete and visual poetry, thereby emphasizing the letter's attributes as a visual entity. This approach to digital poetry is of course valid and illuminating, but it does not allow us to focus sufficient attention on the way the digital letter's graphic materiality is *embodied*, the mode of its apparition on the screen. Thus, instead of situating digital poetry in the genealogy of concrete and visual poetics, I will place digital poetry in the context of other traditions in the arts that share certain aspects of digital poetry's particular form of material embodiment. While it is true that concrete poems can evoke indirectly the kinetic basis of writing, there have also been other, equally pertinent regions of aesthetic activity in which the gestural and rhythmic components of writing have received emphasis. I

believe it is fruitful to consider digital poetry--or at least some varieties of it--in tandem with works created under the rubric of "gestural abstraction," works that can help us to recover some of the more provocative and even subversive uses of animation in contemporary poetic practice.¹³

But before I launch into my reading of gestural abstraction and its relation to digital poetry, I need to justify my recourse to painting (and drawing), since it is not transparently clear why an argument concerning the kinetic features of digital poetry would involve establishing an analogy with static--as opposed to animated--works. In truth, many digital poems are relatively static; that is, while blocks of text or letters might be moved around the screen (as a result of interactive or preprogrammed procedures), the letters themselves do not, in isolation, move or morph. Yet, even in these relatively static poems, attention is drawn to the act of shaping, to the gestures required for creating the strokes that produce inscriptions. The static works of the visual artists I study here share certain features with the

digital poems of this variety. In addition, there is a further link to be made between, on the one hand, Morris's and Twombly's imitations of handwriting and, on the other, digital poems that mime the *ductus*, either by allowing the user to morph or trace a letter by interactive means or by staging the letter as movement, as an animated form (as, for instance, in Bill Marsh's or Jim Andrews's works). So while Twombly and Morris create figures that do not themselves literally move on the canvas, they nonetheless evoke a physicality, the physicality of proto-writing, reminding us that without what Tisseron calls "the inscriptive gesture" no inscription could come into being. Morris and Twombly draw our attention to the gestures rooting but also potentially undermining the integrity of the written character. They attend to the most simple and repeatable motor movements undergirding tracing systems in order to bring to mind the kinetic energy central to but tamed by all acts of inscription. Their fascination with exercises productive of writing is coincident with their desire

to understand the nature (and the culture) of inscribing in general.

Although primarily known as a sculptor and performance artist, Robert Morris has long been interested in the relation of art to written language. In 1973, Morris began working on a series of drawings called *Blind Time*--*Blind Time I* (1973), II (1976), III (1985), IV (1991), V (1999), and VI (2000)--each of which made explicit reference to the relation between handwriting and its gestural impetus. The procedure he developed for producing the series involved several different elements: time (he gave himself a certain number of minutes in which to finish the drawing); touch (Morris worked blindfolded with bare hands); gesture (his physical movements involved the entire upper torso and sometimes the feet as well); and writing (Morris imitated the spatial orientation of Western writing systems, often moving his body--and thus tracing lines--from the upper-left hand corner to the lower right-hand corner). According to Maurice Berger, Morris "would define a particular drawing task (related to such conditions as pressure, distance,

location, and shape), estimate the length of time needed for its completion, and finally, close his eyes and draw on paper with his fingers using graphite mixed with plate oil" (150). To each drawing, Morris appended a text carefully handwritten in the margin (first, at either the left or right bottom corner, then at the top or along the bottom margin, and finally on the back of the paper/vellum). This handwritten text describes the task assigned and the length of time it took to complete it. Morris's experiments in *Blind Time* explore the similarities and differences between more immediate, overtly gestural inscriptions (involving larger motor movements) and more mediated, carefully regulated writing practices (in which these movements are condensed and telescoped), and thus speak directly to the concerns of this essay.

An example will suffice to make the connection between digital mediations and procedural mediations clear. In a drawing from *Blind Time I* (figure 1), Morris juxtaposes a "scrupulously-penciled text" with a double set of graphite smudges (14).¹⁴ The text, or

legend, reads as follows: "With eyes closed, graphite on the hands, and estimating a lapsed time of 3 minutes, both hands attempt to descend the page with identical touching motions in an effort to keep an even vertical column of touches. Time estimation error: +8 seconds." This "even vertical column of touches" shares certain features with the Western organization of text as it appears in the legend on the lower right-hand side.¹⁵ But whereas this legend announces itself clearly as writing, the vertical columns of touches confuse the boundary between writing and smudging, between the highly constrained gestures required to produce legible handwriting and the more full-bodied mark-making gestures that can mime but not reproduce the rigors of handwriting. And yet even the smudges, aligned almost neatly in two rows, recall the disciplinary imperative of written language. Here, Morris seems to be attempting to train his hands to behave in an unnatural, choreographed fashion: both hands strive to move in concert, setting themselves the impossible task of producing two identical sets of marks. The imposition of identity on

two hands that are often trained to execute two different types of gestures mirrors (yet displaces) the de-naturalization of the body's movements in general as this body is submitted to other types of socialization, such as the acquisition of handwriting or draftsmanship. The double-column, two-handed drawings thus render visceral the immediate connection between hand and support while simultaneously focusing attention on writing as a physical *discipline*. The *Blind Time* drawings reveal graphically and dramatically the tension between discipline and self-expression that structures *both* writing and smudging but is of course far more successfully veiled in former. In other words, the drawing re-stages, within a different context, the scenario that initially produced the authoritatively neat handwriting, whose own performance is here relegated to the margins by the kinetic energy of the drawing, or graphic text. In sum, there is no pure immediacy in Morris's "gestural abstraction"; all strokes--minute, neat, and observed by the eye, or larger, messier, and freed of optical surveillance--submit to mediating disciplines. The

latter inscription, however, exposes to both the view of the spectator and the proprioception of the producer the potentially dangerous kinetic energies that have been restrained and transmitted (to varying degrees) in the case of each.

The same juxtapositions between more overtly physical and rhythmic inscriptions, on the one hand, and contained and standardized inscriptions, on the other, characterize the works of Twombly as well. Another member of the late 60s-early 70s generation of artists obsessed with print and written language, Twombly also concentrates his energies on writing and its origins in drawing, marking, and, implicitly, movement. Particularly relevant to my concerns are the dark-ground canvasses created between the years 1967 and 1972; just as Morris turned at approximately that moment to the relation between drawing and writing, so too did Twombly. Both were fascinated by the relation between a task-oriented exercise (with all its implications of imposed rigor and restraint) and a more generous--yet still controlled--use of the body's movements (with all the risks of its irregularities

and uncontrollable impulses). Consider "Cold Stream" of 1966 for instance (figure 2, oil and crayon on canvas). Here, we witness a proliferation of marks, their careful insertion into a defined space, and the strange tension between copying (or repeating), on the one hand, and going beyond the bounds of the model (or initiating), on the other. The allusion to handwriting is again clear (this canvas and others like it have been compared to the proto-writing exercises of a Palmer Method primer). As in the Morris drawings, the marks are arranged along rows and follow the itinerary of a (Western) written text on a blackboard. One is tempted to view these repeated spirals as simultaneously exercises, attempts to achieve the perfect form, and, conversely, de-skilling operations, perverse or dogged efforts to release the energy of the body *through* form. Curiously, the same gestures that produce form eventually instigate its undoing; the letter-like shapes begin to lose their integrity (see left hand lower corner) and become somewhat angular in the process of a kind of ferocious, driven repetition.

In a related painting of 1970, "Untitled" (figure 3), the circling, swirling gestures again appear to move from the left to the right, and each line of spirals is stacked upon another, forming three distinct rows. However, this time these lines of spirals increase markedly in size as the hand moves down the canvas/blackboard. If the swirls began as more contained movements (and if they even seem at times to achieve the status of letters, as at the end of row two), they nonetheless soon become violently erratic, moving in and out of legibility as letters. Similar although not identical gestures, initially telescoped, seek a greater radius, revealing thereby the quantum of explosive physical energy propelling handwriting but usually veiled by skill. Finally, the background of the painting places stress on the notion of support--more particularly, on that peculiar notion of the virgin support of writing that is the schoolchild's fantasy of creation. Here, making marks is cast as an act of resistance; the marker has to counter the dynamic orientation of a previous writing, barely discernable underneath. The painting seems to

be telling us that part of the energy of writing is in fact antagonistic; it comes from a force applied against writing itself. Writing, or, more precisely, the act of inscribing letters, seems to want to destroy writing, to return to the gestural impetus, to the initial corporeal investment in leaving a trace. Twombly discovers an interesting paradox: that the gestures responsible for writing, performed repeatedly, threaten to destroy writing itself.

How does all this relate to digital poetry? I would argue that digital poetry's play with the letter, a play facilitated by animation programs, can be situated within this trajectory of artists working to re-animate the letter, to reveal its hidden energies. My detour through the visual arts is meant to indicate how gestural force is always displaced and disciplined in any act of inscription; digital poetry merely displaces and disciplines the gestural impulse in an entirely different way--by introducing its own mediations, its own checks on subjective agency, such as aleatory or algorithmic procedures and the transfer

of kinetic energy from corporeal practices to digital operations. Some digitally animated poems even follow inscription into the troubling domain where Twombly led it; such poems allow the user to alter to the point of illegibility the letters that her gestures initially brought into being. One of the points I hope these images have made is that the kinetic energy deposited in codified marks can be evoked in a great variety of ways. A Morris does not look like a Twombly; and yet they accomplish similar displacements. I see digital poetry as reclaiming, by means of its own unique innovations, this same expressive ground.

Philippe Castellin, a conceptual artist and digital poet, has himself claimed to belong to the Morris tradition, having been influenced by Morris's attempts to stage inscriptions as performances. In an essay linked to the DOC(K)S website, Élodie Moirec demonstrates how Castellin draws on Morris's use of gesture to create verbal-visual works in "Man/Oeuvre," an installation/performance produced in collaboration with Jean Torregrosa in 1998.¹⁶ Just as Morris's

sculptures (and, implicitly, his drawings) engage the bodies of both the producer and the viewer, so too Castellin's works transform the space of viewing (or reading) into a stage upon which masses and words--or, here, word-masses--are displaced through gestures executed over time. In the 1998 installation/performance, which Castellin would soon recast as a digital poem entitled "Le Poème est la somme," a set of large cinder blocks ("parpaings") are stacked in four columns, each block bearing one word of the sentence "LE POEME EST LA SOMME DE L'ENSEMBLE INFINI DES FORMES A L'INTERIEUR DESQUELLES IL SE SENT TOUJOURS EGALEMENT A L'ETROIT" [THE POEM IS THE SUM OF THE INFINITE TOTALITY OF FORMS INSIDE OF WHICH IT ALWAYS FEELS EQUALLY [ALSO] CONSTRAINED] (Figure 4). The words of the sentence can be read either horizontally, from left to right, or vertically, column by column, in which case the (now ungrammatical) sentence reads: "LE SOMME DES DESQUELLES TOUJOURS/ POEME DE FORMES IL EGALEMENT/ EST L'ENSEMBLE A SE A/ LA INFINI L'INTERIEUR SENT L'ETROIT" [THE SUM OF THE OF WHICH ALWAYS/ POEM OF

FORMS IT EQUALLY [ALSO]/ IS THE TOTALITY TO ITSELF TO/
THE INFINITE INSIDE FEELS CONSTRAINED]. During the
performance of the piece, the separate blocks are
first placed all together in the form of a large cube;
then Jean Torregrosa and Philippe Castellin employ a
set of wheels to lift, transport, and rearrange the
blocks, one by one, first into lines, then into
columns. Sometimes these columns form nonsense
sentences, and sometimes the two artists manage to
recompose a significant sentence, such as that quoted
above. The sculpture/performance/construction /poem
contains the following elements: the passage of time,
repeated rhythmic gestures, writing (understood
broadly, as involving the artist's entire body), and
reading (on the part of both the producer and the
viewer).¹⁷ As Moirec notes, "a rigorous and repetitive
gestural routine [*gestuelle*]" is established as
essential for the production of inscriptions; blocks
of letters become, literally, blocks of matter,
transported--and thus given meaning--through the
expenditure of a visibly large quantity of physical
force.

In Castellin's digital remake of this same piece, "Le poème est la somme" of 1998, the energy required to displace words is transferred from the bodies of the producers to, on the one hand, the machine (a pre-programmed algorithm determines the position of each word on the screen) and, on the other, the hand of the interactive user (a click halts the movement of the letters or propels them into entirely different relationships). While the poem cannot be said to begin at any precise point, when the user pulls up the site she is most often confronted with a screen filled with traveling, flipping, flickering words, the original words found in "Man/Oeuvre" (plus the author's name and the date of the poem), in bright neon colors against a black background. These words float in seemingly haphazard directions for between one and fifteen seconds before they suddenly halt in their tracks, forming an ephemeral and disjointed page of legible signifiers. The circulating words never stop for more than a few seconds, just long enough to give the reader time to form a visual impression, but not long enough to provide her with a readable text. The

viewer responds to the kinetic quality of the radiant words by following their movement--and their arrested patterns--with her eyes, thus tracing out a variety of optical paths that a "normal" text would never produce (figure 5). The learned response to text is challenged, and thus the skills acquired in literacy are temporarily undone, when animation sets written language in motion. The poem never seems to contain the same combinations of words twice; presumably, the permutations of syntax and content are limitless, "à l'infini," even as the sum ("la somme") of the poem remains constant, a given quantity of signifiers placed in temporary arrangements that appear to be limitlessly renewed.

Whereas the earliest manifestation of the poem, "Man/Oeuvre," operated its permutations only on the level of syntax (entire words could be rearranged, but not letters), the digitalized "Le poème est la somme" begins to isolate letters as units of matter that can also be circulated, displaced, submitted to the gestures of the machine or the user who clicks on a word to stop or restart its rotation. This can be seen

with the decomposition of the word "EGALEMENT," which appears on the screen as "EGALEMEN" with the "T" positioned beneath. The word play is delicious: meaning "equally" or "also," "EGALEMENT" suggests that all permutations of the poem are equally valid and that there is no master text toward which the circulating letters are convening. The scission of the word "EGALEMENT" into two parts further indicates that, on the level of their material existence, the letters are themselves nothing but building blocks, each equal to the other (just as the cinder blocks in "Man/Oeuvre" were exactly equal in weight); these building blocks can always break off to form new visual spectacles, new choreographies of language in space. Thus, no single version of the poem-- provisionally fixed--is superior to any other; rather the power of the infinite is reserved for the poem in its "ensemble," in its fluid, unfixed state. As the sentence in "Man/Oeuvre" tells us, the poem always feels its infinity constrained by its static forms: "Le poème est la somme de l'ensemble infini des formes à l'intérieur desquelles il se sent toujours également

à l'étroit," which translates roughly as "The poem is the sum of the infinite totality [ensemble] of forms inside of which it always feels equally [also] constrained." Poetry, it would seem, is conceived here not as fixity but as incessant movement: whether the result of physical gestures or programmed codes, poetry (movement) works in the service of both meaning construction (static, legible inscription) and meaning displacement (illegible but suggestive re-combinations of the elements--kinetic and durable--of inscription).

Clearly, Castellin is troping on Morris's idea of inscription as a type of performance involving kinetic energy expended over time. The user who plugs into "Le poème est la somme" is at once observing and taking part in this performance. She is brought into confrontation with the skills she has acquired to read and write (moving the eyes from left to right, using the fingers and hand to produce inscriptions, in this case digitally on a screen); but this reader is also asked to *de-skill*, to liberate her optical movements from the strict regime of literacy, and to accept the explosive, unregimented shapes of proto-writing as

words and letters dance erratically but rhythmically about the screen. Just as young children learning to write enjoy drawing letters all over the page, truncating words and placing their constitutive units in any arrangement whatsoever, so too the interactive user of "La Poème est la somme" responds with pleasure to the inventive placement of the "T," or to the upside-down "POESIE" which hurtles diagonally across the screen like a jetplane shot down in mid-flight. Inscription is here resituated with respect to time (we feel time elapse), space (we become vividly aware of space as an active participant in communication), and movement (the gestures required for inscription are re-evoked through the trajectories of words on the screen). Finally, we recognize that the poem itself is composed not only of an infinite number of word sequences (as in Oulipian word games), but also of an *infinite number of movements*--movements that occur both in virtual and real time/space.

In my reading, "Le poème est la somme" merely hints at the fact that the movements generating signs are related to movements that challenge and obscure

signification. Castellin never allows words to be smeared or letters to be altered beyond recognition.¹⁸ The link, however, between gestures that create signs and gestures that destroy them is dramatically underscored by Jean-Luc Lamarque, a digital artist whose "pianographique" I would like to discuss in conclusion. While Lamarque's "pianographique" is not a poem in the same way that "Le poème est la somme" attempts to be, this complex and multi-faceted work integrates inscriptions into its rich visual universe in such a way as to emphasize the connection between proto- and post- writing, the kinetic energies that produce signs and the kinetic energies that distort them. "Pianographique" is a collective work by a dizzying number of French web artists and musicians, a "multimedia instrument," as Lamarque tells us, created in 1993 on CD-ROM and distributed on the web.¹⁹ The interactive user is presented with a keyboard on the screen that corresponds to the keyboard beneath her fingertips. Each letter of the user's keyboard, when pressed, produces a distinct sound score and an animation that can be displaced by the hand of the

user by means of a mouse. Playing the "piano" of graphics and sound bites, the user can create an infinite number of verbo-visual-aural collages, while hitting the space bar effaces all that has come before.

It is not possible here to discuss all ten sections of "pianographique" (each of which contains a verbal element of varying complexity, such as "Jazz" or "Je te contrôle et tu n'as pas de choix" [I control you and you have no choice]), but I would like nonetheless to take a quick look at one section in particular, "Rude Boy," programmed by Lamarque with images by Frédéric Matuszek and sound by Jantoma. The imagery of "Rude Boy" is clearly chosen in order to play with the visual differences between discrete types of signifiers: by tapping on "a," "s," or "r," the user produces what looks like a page of type or bar codes ("t" produces the same in red, "z" in white); by tapping on "b," "l," "q," or "x," the user produces some kind of icon or conventionalized non-alphabetic symbol, such as an arrow, a road sign, or, in the case of "x," the Nike insignia; by tapping on

"d," "g," "k," or "n," the user produces a graffiti Tag or Wildstyle; and finally, by tapping on "h," the user produces the word "listen" in lower-case, red letters. If at any point the user decides to engage the mouse, and therefore to distort the image by dragging it around the screen, the sign-quality (and semantic value) of the image is soon lost. The page of type becomes a tapestry, a cloth of woven writing (figure 6), while the Wildstyle inscription, "No Racism," abandons its semantic content as it hollows out the screen and fills it with illusionary three-dimensional space (figure 7). In other words, Lamarque has programmed "pianographique" in such a way that the same constricted motions required to form a letter (curves and lines) are responsible, when digitally processed, for the letter's disfigurations on its radiant support. The swirling motions of the user's hand are mirrored perfectly on the screen, only this time, when the implement is the letter itself, these gestures render the letter illegible; its constituent marks are returned to proto-writing, to the status of meaningless shapes and lines. What is remarkable about

the programming of "pianographique" is that it allows such small displacements to effect such huge distortions. Whereas in Twombly's paintings the letter-like quality of the mark is lost once the body's gestures are magnified and a greater quantum of physical energy is released, here, in the digital universe, even a hand gyrating carefully within the confined radius of a mouse pad can humble legibility, can bring legibility, so to speak, to its knees. Digital poetry is perhaps, then, the ideal genre in which to expose not only the visual properties of written language but also writing's status as a performed activity, its relation to the body's dance.

Notes

1. I am greatly indebted to Stephanie Strickland for exposing me to the work of Camille Utterbach, who presented "TextRain" at the Technopoetry Festival, Georgia Tech, 2002.

2. For a genealogy of digital poetry that connects it back to earlier concrete visual poetics, see Bohn and Bolter.

3. The very innovations I will be discussing here have been attacked as imitating too closely the aesthetics of commercially-oriented animated inscriptions, such as film credits and advertising blurbs. The controversy concerning the imbrication of digital poetry software (especially Flash) in commercial contexts has in fact been quite heated. For an overview of this controversy, see www.webartery.com, contributions by Andrews and Howard. See also Hayles on "flickering signifiers" in "Commentary on the 'Dinner Party.'"

4. Katherine Hayles very astutely noted at the New Media Poetics Conference, where this paper was first presented, that in the case of algorithmically produced displacements of the letter there is no immediate investment of human energy involved. My point is that even if the machine is "having all the fun" (as she and John Cayley put it), the gestures the letters execute on the screen provide an experience

for the viewer that is different from that provided by static text. Within that difference there are, of course, further distinctions to be made; I can only begin here to sketch out a phenomenology of reading animated texts. Future discussions of the kinesthetic experience of screen-viewing will have to rely on recent scholarship in film reception, which has been particularly attentive to the ways in which movements on a screen affect the body of the viewer.

5. Robert Kendall, e-mail dated October 8, 2002. Kendall proposes the term "scriptal" animation (in response to my suggestion, "ductile" animation). He writes: "most animated poetry is invoking not so much the movement of the hand in handwriting, but the movement of the typewriter pattern or the word-processing cursor. There are a few poems I've seen (such as Bill Marsh's 'Aria') that build letters kinetically stroke by stroke, but most of them either build words letter by letter (in a process that looks like text being typed on a word processing screen) or else work with larger units, building texts a word or line at a time. Maybe the term 'scribal' animation

would be more appropriate, since this implies handwriting but could also apply to typing" (e-mail dated October 8, 2002).

6. See, for instance, Mez's "Fleshistics" and Stefan's "dreamlife of letters."

7. See Haraway, Poster and Hayles (1999).

8. With respect to the production of the desiring body, Keep underscores the vulnerability of our "own" desires to those of the pre-programmed hypertextual system. When we sit before a computer screen and engage our desires with the hypertext's desires, he suggests, our unified subjectivity is compromised.

9. See, for instance, Leroi-Gourhan.

10. See Ong for a classical, if flawed, treatment of the problem.

11. According to Duborgel, the child has to undergo a kind of apprenticeship of the arbitrary (142), since the child's instinct is to invest the letters themselves with pictographic values. See also Georgel.

12. I am referring here to Paul de Man's association of poetry with the play (agency) of the

letter (divorced from any lexical or semantic function) and his theoretical reflections on "materiality" and "material effects" in "Phenomenality and Materiality in Kant." For de Man, the letter, as mark of support, is an entirely inhuman thing; seen in this light, the letter most decidedly cannot be interpreted as embodying the kinetic energy of a human body. De Man's battle against the anthropomorphizing moves of phenomenological criticism are astringent and thought-provoking; however, his position cannot account for--and is to some extent contradicted by--a long line of artists and writers (including Twombly and Morris) who approach mark-making as a corporeal practice in which kinetic investments leave a visible remainder in the trace. De Man's argument should be contrasted with Barthes's in *Cy Twombly* and Strickland's in "Moving Through Me As I Move: A Paradigm for Interaction."

13. "Gestural abstraction" refers to a movement in American art of the 1940s and 50s that included painters such as Willem de Kooning and Jackson Pollack. Robert Morris does not, strictly speaking,

belong to this group; however, his interest in gesture, and his decision to foreground its productive contribution in his works, allies him with some of the artists working in that mode. Twombly's relation to "gestural abstraction" is treated by Varnedoe in *Cy Twombly* where he writes: "Their gestural abstraction [that of the New York School] expressed the notion that the most acute moments of self-realization were epiphanic and to be externalized only by heroic acts of Zen spontaneity, disengaged from control and committed instead to dynamism, risk, and chance" (24). In contrast, according to Varnedoe, Twombly's works submit spontaneously to compulsive repetition, the transgressive physicality of the stroke to an obsessive discipline.

14. Meltzer explores the public nature of writing versus the private investments we make in it. "Learning to write," she suggests, "we learn to belong to and participate in a public mode of inscription, to subordinate the private and disordered gestures of the hand to the measured and mathematical means of writing" (16); "Morris's de-skilling repetitions turn

back the school's clock" (17); "They reveal that underside of language, where presence and incarnated inscription are hidden from view" (18); "Blind time turns text into trace, unravels writing into drawing . . . The drawings are about writing forgetting itself as such" (19).

15. The slant of the columns suggests the natural leaning, the list of the body as it moves toward the end of the row. This detail is not insignificant: here the graphite "marking" reflects the body's engagement in a way that the neat script on the right does not.

16. The essay by Élodie Moirec is entitled "Akenaton" and was read in February 2002 at the occasion of a conference presentation on Man/Oeuvre at Beaubourg.

17. Moirec writes: "at the beginning of the performance [there is] a cube which, during all the action, is transformed and is transported. We can comprehend it as a minimalist sculpture, because it is a volume of modular structure, of minimal, denuded forms, on the human scale and realized with industrial material. It is decomposed in an aleatory fashion,

then recomposed until there appears a poem-wall with the inscription of words on select cinder blocks. . . . [T]he volume [acts] as a reference point and a register of the rhythm of the body that, through its action, displaces the blocks. The words appear without any ephemeral order having been decided in advance: as soon as they are positioned they are unveiled. The execution is thus based on the intervention of chance. We read: forms, totality, also, is, always, poem, constrained. The action. By means of the action, the artist has access to words. . . . The cinder blocks pass from hand to hand; words and volumes are transmitted by means of the same gesture" ("Akenaton," n.p., my translation).

18. A comparison might fruitfully be drawn here between Castellin's work and that of Komninos Zervos, whose "Beer," for instance, operates by distorting the shapes of letters until they form other letters or a series of lines. In "Beer" there is a kind of morphological motivation at work: the shape of a letter (and not its phonetic or metrical value) motivates the next letter that appears.

19. Lamarque's collaborators include Jean-Christophe Bourroux (credited as "webmaster"), Jérôme and Xavier Pehuet, Guillaume Delaunay, Nicolas Clauss, Jean-Jacques Birgé, Jantoma, Frédéric Matuszek, Serge de Lambier, NKO, Olivier Bardin, Bérangère Lallemon, Lior Smilovici, Ed Coomes, and Nicolas Thépot.

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