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LOSS OF HOVER: RECREATING SHOCKWAVE VNIVERSE AS AN APP FOR IPAD¹

Abstract: *V* appeared in 2002, distributed across an invertible two-in-one print book from Penguin, *V: WaveSon.nets / Losing L'una*, and two online locations: the first, *V: Vniverse*, a Director project with Cynthia Lawson, and the second, *Errand Upon Which We Came*, a Flash piece with M.D. Coverley. The print book contained at its center the url for the *Vniverse* site.

This print book was re-issued February 2014 in a new edition by SpringGun Press as *V: Wave-Tercets / Losing L'una*. The truncation from Son.nets to Tercets was driven by limitations and affordances that we encountered as we set out to modify the *Vniverse* Director project to run as an app on iPad. The original *Vniverse* was created, not using Director's timeline, but all in one frame. This choice took advantage of the speed of imaging Lingo to control both animation and interaction, permitting swift gestural command of the appearance of language emerging without lag from "the sky." Since mobile devices support an entirely different suite of gestures, we needed to re-implement *Vniverse* as an app for a smaller screen and a different gestural repertoire.

The re-education of hand and mind, the gestural translation, that such a project entails is our focus in this article which addresses the loss of hover as gesture, the loss of location—a point is no longer a place—and the loss of overview, or revelation, as sweeping gestures no longer reveal, but re-scale. Emotional coloring is shifted when exchanging a click for a tap imposes a required time-delay, when an expansive swing-sweep of mouse is substituted by contractive pinch-zoom, or when legibility can be gained only through granulation (losing the sense of fades between whole poems against which active sky stars can be activated), or through text compression and/or suppression (son.nets to tercets). These losses are in part compensated by other gains.

Keywords: re-implementation, migrating e-lit, gestural interface, gestural translation, platforms

¹ This text is based on the talk jointly delivered at the Electronic Literature Organization Conference "Hold The Light" in Milwaukee 2014.

Literature is always political: it creates subversive alternatives by implementing, within itself, unpredictable junctions and ruptures. It also, often, contests its own devices; however, in the past, these were rarely literature's main target.

Today, the situation has changed. When electronic literature, created and performed in an environment infused with computation, engages its own means, it simultaneously engages the means by which war, production, desire, memory, and much else are managed around the globe. E-writers do not simply pursue provocative parallel play; rather they have their hands inside the lion's mouth, so to speak. It was not always so, the lion a mere kitten of potential in, say, 1995—or even 2002 when the Shockwave *Vniverse* was written.

An important part of *Vniverse* is its use of the hand in an idiosyncratic gestural interface. Maria Angel and Anna Gibbs have, in several essays, directed our attention to e-writing's embodiment. They quote Bronowski, "the hand is the cutting edge of the mind," and lay out Marcel Jousse's view of gesture as the body's "direct resonance" with the energies of the environment.²

In a June 2, 2014 *New York Times* article, "Does Handwriting Matter?," we learn that indeed it does. Young children's brains activate more, they learn to read more quickly, and they remain better able to generate ideas and retain information when they learn their letters by drawing freehand, compared with typing or tracing. In both lab and real-world settings, students who take notes by hand learn better than when they keyboard.

Benjamin Bratton, in *The Stack: On Software and Sovereignty*, his 2016 assessment of the geo- and bio-political realities of planetary-scale computing, cites Serres: "About our hands, those prehensile interfaces with which we embody cognition and manipulation, Michel Serres writes that they are never *finished*. Unlike animal limbs and their ecological niches, the hand is 'despecialized' and adapted not to one specific task like the crab's claw but open to the limit of the world."³

Angel and Gibbs view words as material architectures; not as, or not only as, representations of speech. Most critiques of e-lit take such an extended view of textuality. In our view, diagrams, notation, and images should be considered material architectures as well. The hand is the point of contact with these architectures. The hand both manipulates and gestures; these two actions should be recognized as separate. However, they can be metaphorically mapped onto one another by the e-writer, and this mapping is often at the heart of both the significance and the affect of a piece.

² See: M. Angel, A. Gibbs, "At the Time of Writing: Digital Media, Gesture, and Handwriting", *Electronic Book Review*, 30.08.2013, <http://www.electronicbookreview.com/thread/electropoetics/gesture>; see also: M. Angel, A. Gibbs, "The Ethos of 'Walking': Digital Writing and the Temporal Animation of Space", *Formules* 2014, no. 18, pp. 155-167.

³ B. Bratton, *The Stack: On Software and the Sovereignty*, Cambridge, MA: MIT Press, 2015, p. 222.

Davin Heckman, in his paper “Technics and Violence in Electronic Literature,”⁴ explores e-lit as a form of violence against technical systems by way of explicating Serge Bouchardon’s hand-to-hand battles in his works, *The 12 Labors of the Internet User*, *Touch*, and *Loss of Grasp*. Heckman stresses that, for Bouchardon, grasp signifies control; that the loss of it arouses an anxious desire in the protagonist of *Loss of Grasp*, as well as in the reader who is shown a man whose grasp of his place in city, cosmos, marriage and parenthood is troubled, as are his perceptions of homophones and of sequence. In Heckman’s view, *Loss of Grasp* enacts a quarrel with digital tools. Indeed, a quarrel but no sabotage, for all the troubling is enabled by Bouchardon’s firm grasp on—and of—fully functioning code.

The hand actions in all three of Bouchardon’s Flash pieces, including the hit, move, caress, stretch, and scrub-like motions of *Touch*, are in fact mouse-strokes or movements of the cursor. Two other kinds of digital touch exist, the resistive pressure touch required at an ATM and the capacitance contact of tablets and cell phones. A work for the multi-touch screen that maps the manipulation use of the hand to a gestural meaning is the novella *Pry* by Samantha Gorman and Danny Cannizzaro. Here a two-finger pinch-apart gesture is used to pry open an onscreen eye. As manipulation, this action yields what we used to call stretch-text, a new insertion of text in an existing writing; as plot, or framing, device, it accesses subconscious awareness of the protagonist. It may also, imaginatively, refer to *Un Chien Andalou* by Buñuel. If the cursor gestures of Bouchardon’s touch pieces, the eye-stretching gesture of *Pry*, and the gestures of first-person shooter literary games are metaphorically violent, perhaps signaling the quarrel with technical systems that Heckman suggests, the *Vniverse* project enacts its quarrel in a different way.

*V*⁵ appeared in 2002, distributed across a print book from Penguin, *V: WaveSon-nets / Losing L’una*, and two online locations: the first, *V: Vniverse*, a Director project with Cynthia Lawson published in the *Iowa Review Web*, and the second, *Errand Upon Which We Came*, a Flash piece created with M.D. Coverley, published in *Cauldron and Net*. In 2014, on its way to becoming a swarm of forms, an updated edition of the print book, *V: WaveTercets / Losing L’una*, was published by SpringGun Press and the *Vniverse* app for iPad was created with Ian Hatcher.

V is a poem of *migration*: Ice Age / Information Age, equally nomadic, explored one against the other. Ice-Age nomads invented a Zodiac of constellations: the clock, calendar, and map by which they tracked animals and seasons together. Information Age migrants crawl a globe-spanning network run on satellites and towers. *Vniverse* is a Star-Body grid accessed on an Information Power grid. To it, we bring what

⁴ D. Heckman, “Technics and Violence in Electronic Literature”, *Culture Machine* 2011, no. 12, <http://www.culturemachine.net/index.php/cm/article/view/435/464>.

⁵ See: <http://vniverse.com>; <http://collection.eliterature.org/2/>; <http://www.springgunpress.com/v-stephaniestrackland>; <http://califia.us/Errand/title1a.htm>; <https://search.itunes.apple.com/WebObjects/MZ-ContentLink.woa/wa/link?path=apps%2fvniverse>; <http://www.amazon.com/V-WaveSon-nets-Losing-Stephanie-Strickland/dp/0142002453>.

the Ice Age reader brought to the circling sky—either impulses, go here, go there, or survival-oriented questions. For people of the Ice Age: how to intersect with the migrating animals, how to keep from bearing children when the temperature is minus sixty degrees. For them, the sky is an Oracle, a constructed relation to a natural world probed with calculations. For us, the digital world is precisely that—but what are we probing?

The original Shockwave *Vniverse* aimed to create an interface of gestures with an analogy to the hunting of animals or stars: choose to hunt them, discern them in their disappearing, linger, learn their signs, retrace their paths, and then engage with some persistence or force; cause disappearance, go back and inquire, re-associate, make your own meanings to justify the interference or death you have caused.

The original Shockwave *Vniverse* was created all in one frame of Director's timeline. This choice took advantage of the speed of imaging Lingo to control both animation and interaction, permitting swift gestural command of language as it appeared to emerge without lag from "the sky." In this space, time never advances—so far as the Director timeline is concerned—but it is highly active. All of the time resources go toward responsiveness and the production of language, rather than visual display. Space has been fashioned to amplify the sense of resonance that internal timings create.

The Shockwave interface of the original *Vniverse* presents a text-less dot-sprinkled screen (after the loading of a twirling screen of such dots which seemed from the start to be spontaneously read as stars). It requires the reader to interact *without* directions. She must choose to "read the stars," just as Ice Age nomads, facing a sky they could not mark—but could interact with—made it into something they could read.

As eyes sweep the night sky, a corollary swinging, **sweeping** gesture of the hand reveals diagrammed constellations, numbers, and words that appear *and immediately disappear*.

Hovering, or **lingering without clicking**, an analog to Ice Age focus on a particular part of the sky, produces the spelling out text of a keyword-tagged-and-numbered Tercet. The moment your hand leaves that spot, you lose interactive response. There is a sense of releasing text by lingering on it.

As a corollary to what must have been repeated and devoted Ice Age focus, actually **clicking a star** stabilizes its constellation—the shape remains onscreen even as you move your hand away. One may **trace the constellation without clicking** to create compressed poems consisting of keywords—one can also **hover-without-clicking over any star** in the sky to read it against the shape of the perceived constellation.

To produce knowledge of multiyear differences in the sky required enormous, persistent communal attention. In the *Vniverse*, **a second click** on the same spot releases the text of a 15-line WaveSon.net which assembles, not sequentially, but beginning with that star's Tercet and in relation to it. Metaphorically one follows, or tracks, this assembling. The need for multi-directional awareness—natural in Ice Age hunters—is recruited as well in the Information Age.

Clicking a third time, and thereafter, toggles between Tercet and Son.net form. Clicking for the third time in the same place is the most obsessive/aggressive gesture required. Persistence, persistent re-seeing, requires one to imagine that each node has an unexamined depth.

Clicking a “**next**” triggers a second Son.net bleeding through the first. A text-decay process takes place that leaves many states of the poem co-present onscreen: time of break-up, time of emergence, and time of cross-layer existence *between* dissolving and emerging co-exist with the time of reading forward.

At any point in this sequence of responses by the sky, the hand can **hover**, overlaying any diagram or assemblage or bleed-through of text with a new number, a newly colored keyword, or Tercet from any place in the sky.

Finally, **clicking on the darkness**—made possible by the pixel precision of the hovering cursor—makes everything disappear. The play-read process is massively iterative. Iterative processes of return overwhelm individual differences in sampling, just as years of sky observation yielded recognizable astronomical cycles, or significant conjunctions.

These cognitive gestures are distinct and complementary to print. As Edward Picot said, “reading [...] in this hopping-and-dipping manner rather than in sequence seems to bring out more quickly the themes which run through the whole group—references to astronomy, to cosmological time, to mathematical sequences, to Tarot cards, to Simone Weil, and the letter V, symbolizing fertility and virginity both at the same time [...] the spreading-out of stars in ‘a wedge of the sky’ and the spreading-out of electrons in a cathode-ray tube.”⁶ Indeed, to arrive at such a *summary* understanding from the print book can take hours.

As we know, phones and tablets do not support Flash/Director. For the *Vniverse* to live, it needed new co-creators and new coding, becoming part of a larger family of works, all of which bear on its vitality. The iPad Objective-C *Vniverse* (started in Titanium, whose instability dashed our hopes of simultaneous availability for Android) is built with new gestures and with gesture “translations.” We do lose hover: no lingering, sweeping, prosthetic cursor—no cursor at all to operate as a pacing device; no clicking, single or repeated. Instead, under capacitive touch, the sky is brought down under our hands.

On that sky, readers discover the distinct pleasure of **Drawing** their own constellations, freely connecting stars as they wish. These shapes do not immediately fade—they persist until actively cleared. This form of exploring the space is closer to building a simulation, while the cursor sweep on the old *Vniverse* is more a searching inspection of what cannot be directly touched.

The iPad *Vniverse* offers its reader a complete linear play-through of the 232 **Wave Tercets**, which the Shockwave *Vniverse* did not. Steve Tomasula says: “I was

⁶ E. Picot, “Hyperliterature: The Apotheosis of Self-Publishing?”, *Slope* 2003, no. 17, http://www.slope.org/archive/issue17/hyper_intro5.html.

reading it, then carried the iPad into a dark room, so dark I couldn't see the iPad, only *Vniverse*, and the constellations stood out in a way that was so evocative [...]. I lay on a bed with the iPad above me, like lying in a field, looking up at a starry night as the poetry played across the constellations [...]. Such a great reading experience!"⁷ Here, touching the iPad is inhibited, and Steve is *not* looking down on it, but up! Certainly this reading (a kind of *reading-to-you*) is both more oral and more active than print.

A pausing or paused attention, however, is hard to achieve on the multi-touch screen. To touch it is to commit to an act. We approach the pause most closely in *Constellations* mode. The text of any Tercet will stay still as you read it—and you can explore the keyword outline of the Constellation to learn that this order is *not* identical to the sequential order of Tercets.

The iPad *Vniverse*, unlike its predecessor, features an *Oracle* which the reader may consult, choosing from seven supplied questions. The Oracle's responses are unpredictable and enigmatic—it is a black box, a closed system within the closed system of the compiled app itself, which in turn resides within the black box of the iPad, a proprietary consumer device. The Oracle, like the iPad, can be asked for information or operated as a tool, but its borders of acceptable usage are strictly controlled, and its secrets as a system remain hidden. The inclusion of the Oracle, however, is an example of using gesture and interaction metaphorically to engage, contest, or comment on literature's—and society's—organization.

Our technical conclusions: to move from one platform to another, from a Flash to an iPad environment, is to affect the meaning of directionality, trajectory, and haptic space. The translation can entail the loss of a manipulation—the mouse-down movement no longer exists, the moment of touch is a mouse-release moment—which then entails a loss of gesture: the non-clicking pause/linger/hover. As well there is a loss of location—a point is no longer a fixed place—and a loss of overview, or revelation, as sweeping gestures become swipes and no longer reveal, but re-scale. Though almost every effect possible in the Shockwave environment is reproducible in Objective C, implementation decisions are made using different categories: instead of manipulating mouse-gesture, one plays with time-delays and scale.

Emotional coloring shifts when an expansive swinging hand movement is substituted by contractive pinch-zoom. This more physiologically constrained motion—instead of gaining in precision as expected in the physical world—is in fact less precise, less pixel-specific. The accuracy of a hovering cursor is replaced by the inaccuracy of a blunt, visually obscurant finger. This loss we were willing to sustain, but further translation of the piece to newer platforms requires acknowledgment and consideration of different platform-specific effects.

Augmented reality (AR) devices, such as Oculus Rift, in vogue as of this writing, strike us as particularly ill-suited for hosting a new instantiation of *Vniverse*. Bratton

⁷ Steve Tomasula, private e-mail communication, 2014.

wonders about the use of AR in *The Stack: On Software and Sovereignty*: “Seeing the world through such an apparatus, can the primate brain manage to keep the critical space of doctrinal metaphor open against absolutism? Does it want to? Are the User’s cognitive abilities extended by this reality, or are they amputated?”⁸ We are equally wary. AR’s aggressive imposition of labels onto reality itself, and its erosion of metaphor in favor of crude literalism, are fundamentally at odds with the conceptual goals of *Vniverse* as a project. *Vniverse* is about agency and invention, whereas AR is a channel for canonical categorizations, predefined and organized by unseen authorities, to be layered onto a user’s experience of space.

We note a distinction here between a hypothetical AR *Vniverse* and a hypothetical *Vniverse* physical installation—the latter in fact was envisioned as a third simultaneous platform for the project’s debut in 2002, accompanying the print book and the Shockwave poem (funds permitting). This installation would have included sensors by which an audience could trigger recordings of words/lines/stanzas from the poem by moving in a beautiful dark room, stars hung from the ceiling and shining water or Mylar on the floor to reflect the spoken words. Such an experience of *Vniverse* would be a vivid navigation and crowd exploration as the visitors moved in tandem creating overlapping patterns of sound and motion and reflected text. Unlike our imagined AR version, nothing about the physical installation would seek to confuse the distinction between the map and what was being mapped.

In conclusion, we ask to what extent the movements permitted us for manipulation, which always map onto metaphoric gestures, feed back onto our forms of knowing, both cultural and neuronal. Never have so many people been routed through such a minimal number of highly routinized gestures—not the gestures of hunting or planting that were developed over generations, but rather those devised quickly in some few laboratories of design—and never have these gestures been so widely needed, to obtain a job, to obtain knowledge, to obtain access—even to one’s own information. Already, at a very young age, children are taught aggressive intervention and one right answer; they are given no occasion to pause, linger, consider, or return for the particular response that is, at that moment, idiosyncratically right.

We would like to quote Davin Heckman, from an email exchange with which we deeply agree: “I struggle constantly with being able to explore the space and scale of the screen [...] because my finger is a very literal material part of me [...] while the cursor functions as a true prosthetic, capable of extending my reach into the space, but not being actually me in that space [...]. With touch screen, I have no control over the representation of myself [...] I do not manipulate the space. Instead, I participate directly in it, and am thus manipulated by the space itself.”⁹

Our question: Can we critique media from within by doing something like modding? Can we significantly vary pacing or gesture—perhaps especially introducing

⁸ B. Bratton, *The Stack...*, op. cit., p. 236.

⁹ Davin Heckman, private email communication, 2014.

variability into gestures by creating a family or swarm of works? Or is the proprietary black box the deck of the Titanic on/in which we play at our peril? Or, indeed, as “on” and “in” lose any of the oppositional quality they maintain in a gravitational world, are we already at sea, having lost overboard our children’s freehand gestures and perhaps thereby part of their ability to engage, and contest, the enormous concentration of global power that knows them, and manipulates them, through computation.

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