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## Surface Reading *The Upside Down Chandelier*: Interface “Mastery” and Feminism

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# SURFACE READING THE UPSIDE DOWN CHANDELIER: INTERFACE "MASTERY" AND FEMINISM

BY KATHI INMAN BERENS

In this volume about the field impact of e-literature works by and about women, I suggest that a "feminist" interface engages all levels of materiality, from hardware, to code, to human body, and algorithms that assist us in experiences of decoding or reading. Interfaces are certainly material; but as Alexander Galloway observes, interface is an "effect" more than a "thing." The hardware and software interfaces of *The Upside Down Chandelier* (UDC), a collaboratively made multiplatform digital artwork, are not merely "significant surfaces" but thresholds of reading experience. Ported from large installation to browser, UDC allows us to reflect on how interfaces prompt site-specific reading strategies tied to affective states when we read publicly (in installation) and privately (in browser). My experience curating several e-literature exhibits has given me occasion to observe hundreds of people encountering e-lit interfaces and using different reading strategies to engage the works. Citing *The Tate Handbook* on curating art (as quoted in Vince Dziekan's *Virtuality and the Art of Exhibition*), Dene Grigar notes that "much is gained when approaching art as a system that involves a synergistic relationship among the works, the space, visitors, and curator." This is because work is always situated in particular settings that influence reception, so many environmental factors that it's impossible to sketch their accretive and dynamic effect. Whether a room is crowded or empty, noisy or quiet, hot or cold will influence guests' willingness to stay or impulse to flee, for example. And this mentions nothing of the architectural qualities of the installation space itself. Embodied and dynamic conditions of extra-artistic encounter create a context that changes moment-to-moment. Exhibiting the first showcase of electronic literature at the U.S. Library of Congress with co-curator Grigar, I observed how quickly the mood or feeling in the room would shift when large numbers of children were present. Adults became more relaxed and playful in their willingness to engage a challenging e-lit interface. Adults were more likely to visit the Creation Stations (hands-on interactive exhibits I designed to compliment themes in each of the e-literature stations) if children were playing there.<sup>143</sup>

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143 See the U.S. Library of Congress's archival website of the "Electronic Literature Showcase" here: <http://www.loc.gov/rr/program/elit-showcase.html>. See Dene Grigar's archival website for the featured exhibit we co-curated, "E-Literature and Its Emerging Forms," here: <http://dtc-wsuv.org/elit/elit-loc/>. Susan Garfinkel, Library of Congress Digital Reference Librarian, hosted the Showcase and assisted in the curation of books for the exhibit. See images of the exhibit here: <https://www.flickr.com/groups/elit-loc/pool/>.

*The Upside Down Chandelier* is uniquely suited to yield an interface comparison between installation and browser-based reading because it is the exact same code running in both installation and browser, according to *UDC* co-author Christine Wilks, who repurposed code for *UDC* from a Remixworx project "Notes Noir" she made with Randy Adams.<sup>144</sup> One samples the *UDC* installation through the full human sensorium, and decodes *UDC* in a browser with help from algorithmic augmentations provided by Google Translate and Search. *UDC*, a multiplatform and collaboratively-authored digital art work, was created for a one-month installation at art gallery housed in a former tobacco factory in Košice, Slovakia that employed mostly women workers. *UDC* is intensely site-specific, conjuring the women tobacco factory workers in the physical space where they once worked particularly through use of spoken-word phonetic sounds from the various languages spoken on-site. After installation, *UDC* was ported to the browser.

Installed in a 50x25 meters room in the factory, *UDC* addresses the entire human sensorium: sound, vibration, proprioception, vision, touch and social awareness. The visitor's body becomes another of the work's interfaces, along with the code, the computers, the projectors, screens and brick walls. "It is quite common to understand interfaces less as a surface but as a doorway or a window," Galloway notes (36).<sup>145</sup> *UDC*'s many surfaces created a highly dynamic environment where the gaze was ambient, not funneled, as it is when we view works in a browser or tablet. The embodiment of the women workers whose voices formerly filled the tobacco factory and the embodiment of the four women artists from four countries who gathered in Košice to collaboratively make the work is a palpable aspect of the installation experience. In browser, this same artwork—drastically minimized in scope and decontextualized from its tobacco-factory setting—becomes a heady puzzle: not an embodied art experience, but a difficult text that requires interruptive, "deformative" techniques in order to be read.<sup>146</sup>

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144 "Repurposing" was a common theme and practice for all of the featured works in the show "Repurposing in Electronic Literature" curated by Mencía and Husárová at the DIG Gallery exhibition in Košice. For more on Wilks' extensive remix projects, see this path she created, "a crisscross trail < r3/\1X\0RX" <http://crisscross.net/remixworx/indexcextrail.html>.

145 "Interface" is a term "borrowed from chemistry, where it means 'a surface forming a common boundary of two bodies, spaces, phases'" (Cramer and Fuller, 149). Cramer and Fuller's "typology of interfaces" itemizes five aspects of interface from the material to the symbolic. The five typologies are: hardware that connects to users; hardware that connects to hardware; software that connects hardware to software; protocols that determine relations between software and software; and "symbolic handles" that make software accessible to users. "User interfaces," they conclude, "are often mistaken in media studies for interface as a whole."

146 "Deformance" is a critical practice named by Jerome McGann and Lisa Samuels that "tries to set [interpretive] modes of exegesis on new footing" by "working against the grain" of a poem's apparent intended meaning. "The question is not 'what does the poem mean' but 'how do we release or expose the poem's possibilities of meaning?'" See also Mark Sample's "Notes Toward a Deformed Humanities" which advocates "breaking things" as a way to understand their material composition as a springboard to working against the grain. In a 2015 Modern Language Association talk, however, Sample qualified the central claim of "Notes" by suggesting that "breaking things" had

For the women tobacco workers who arrived in Košice in the 1851 and later, the journey to the tobacco factory was also a journey away from mostly unpaid domestic labor in their villages, labor conditions that continue to define most work done by most women in the world today. In the Košice tobacco factory, where women talked as they sorted through dried tobacco leaves and rolled cigarettes, Slovak, German and Hungarian languages floated through the air. This cosmopolitan, sonic inspiration for multiplatform work manifested in spoken-word phonemes, algorithmically sequenced, that filled the exhibition space with the fundamental sounds of Slovak, German, Hungarian and English, phonetic sounds that never resolve into intelligible words. Images, also generatively mixed, of the chandelier the women factory workers donated to the nearby St. Elisabeth's Cathedral, made a round, bright, golden "sun" on a large screen inside the tobacco factory. Words from each of the languages, beamed from two smaller projectors, added historical context.



Figure 1: Animated word in Hungarian ("tobacco") positioned on top of collaged, generated chandelier images in *The Upside Down Chandelier*. Spoken-word phonemes in four languages, also generated, are a key aspect of this multimodal work.

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been reduced to a slogan. He eschewed "breaking things" for an ethic of "care and repair," pace Steven Jackson, and applied it to Twitter bots he has made such as the Markov-Chain-and-Melville bot @\_lostbuoy\_: [https://twitter.com/\\_lostbuoy\\_](https://twitter.com/_lostbuoy_).

*The Upside Down Chandelier's* interfaces shift dramatically when the work is adapted from a large installation in a 50x25 meters room to a browser window; but our critical paradigms for understanding the significance of such an adaptation are mismatched to the task, since adaptation theory typically assume adaptation from one stable, non-protean medial format to another. Case studies in Linda Hutcheon's seminal *Theory of Adaptation* (second edition, 2012) describe fundamental shifts in medial form: from book to screenplay, for example, or movie to code to make a video game. By contrast, *The Upside Down Chandelier* entirely retains its medial form: it's the exact same code running into two different environments. For Hutcheon, adaptation is "repetition with variation"; but this definition emphasizes theme, not medial materiality. *UDC* thus provides an unusual opportunity to ask: how do interfaces inflect *exactly the same media object* differently in a public installation and a private browser? I argue that the urge to "read" *UDC* dominates only when it's stripped of embodied, site-specific context and ported to the browser, where readers can read privately, and use networked search to dig for deeper meaning.

I coin the term "augmented reading" to describe my use of extra-textual interfaces such as Google Translate and Google Search to build a reading apparatus that turns out to be protean, unreliable, but essential for decoding works like *UDC*.<sup>147</sup> <sup>148</sup>Surfaces proliferated as I mined the work for interpretive gems. Without materials from the artists to confirm or disconfirm my interpretations, my interpretation were founded on surfaces that factually shift, as I discuss below. Unlike "symptomatic reading" and the "hermeneutics of suspicion," where the critic is a detective looking for hidden ideologies or power operations, surface reading of interactive digital objects attends to what is "evident, perceptible, apprehensible in texts," as Stephen Best and Sharon Marcus put it in their 2009 essay "Surface Reading: An Introduction." But what constitutes "the apprehensible" shifts in environments like Google Translate and Search, smart algorithms designed to "learn" from previous searches. As I discovered, particular translations one day might transmute the next time I searched. Hence Best and Marcus' observation that

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147 Hutcheon: "Recognition and remembrance are part of the pleasure (and risk) of experiencing an adaptation; so too is change. Thematic and narrative persistence combines with material variation," she notes, citing Ropars-Wuilleumier's "L'oeuvre au double: Sur les paradoxes de l'adaptation." See Hutcheon pp. 4-8.

148 In the research literature thus far, the phrase "augmented reading" has been used to describe layering of digital objects onto the physical world. There are two uses of the term "augmented reading" (outside of K-12 literacy research), both uses having to do with virtual layers situated on top of physical books: 1) Google has patented a technology that will lay a hologram layer over books; see Google's patent application for the "Story Device," published 3 March 2016, here: <http://1.usa.gov/1XxZgBv> and reported in Fast Company here: <http://www.fastcompany.com/3057464/google-takes-storybooks-through-the-looking-glass-with-augmented-reality>. 2) Three master's candidates in Copenhagen presented a paper that was "a prototype implementation of an augmented reading experience for children in which a physical copy of the book *The Little Prince* is tagged with QR codes."

"[s]urface is what insists on being looked at rather than what we must train ourselves to see through" takes on special urgency, since the many surfaces of *UDC*—the generative quality of the art itself, and the protean outputs of the Google searches—meant that my information was perpetually provisional. To read the surface was to derive a field of potential meanings rather than uncover a fixed set of facts.

"Those of us who cut our intellectual teeth on deconstruction, ideology and critique, and the hermeneutics of suspicion" Best and Marcus write,

have often found those demystifying protocols superfluous in an era when images of torture at Abu Ghraib and elsewhere were immediately circulated on the internet; the real-time coverage of Hurricane Katrina showed in ways that required little explication the state's abandonment of its African American citizens; and many people instantly recognized as lies political statements such as "mission accomplished."

The trick of deconstruction is the surprise revelation, where the text "undoes" itself. The capacity for deconstructive surprise relies upon print as a stable medial environment, where the critic is the surgeon performing an operation on a medially inert text. In his essay "Why Has Critique Run Out of Steam," Bruno Latour notes that deconstructive readings became a style. He reminds us that the critic "is not the one who debunks, but the one who assembles" (2004, page 246). Reading *The Upside Down Chandelier* and other generative digital literature means to assemble patterns in the combined behaviors of machinic, algorithmic, and human agents that interact unpredictably. In surface reading, pattern detection of interactivity lays the groundwork for larger interpretive critique, which in my case became a self-conscious, feminist rumination on my impulse to "master" *UDC*.

The literary canon is built upon reading practices developed in relation to the book as a stable media object that returns the same information each time it is opened. *The Upside Down Chandelier*, being a generative text, is "new" each time within a set of parameters one learns to detect. For example, I discerned that the words featured in *UDC* are translations of the same base set of 27 words. That pattern recognized, I could begin to interpret a theme based on elements common to those words, and explore the significance of their translation into German, Hungarian, Slovak and English. (I discuss the Google-assisted translations, and mistranslations, below.) Pattern detection, in its emphasis on nebulous outputs that require decoding, is a more materialist way to construe close reading, that sine qua non of humanities interpretation. In this sense, surface reading e-literature interfaces opens new vistas on what kinds of knowledge are vested with authority in digital literary humanities, and which legacies from the codex tradition of canon formation e-literature prompts us to reconsider or disrupt.

## **UPSIDE DOWN CHANDELIER INTERFACE #1: LARGE INSTALLATION**

*The Upside Down Chandelier* wasn't created for "readers" but guests. Both site- and event-specific, *UDC* in a browser doesn't remediate the grandeur of physical emplacement. *UDC* was part of the show "Repurposing in Electronic Literature" which ran November 2-20, 2013 in Košice, Slovakia at the DIG (Digital Intervention Group) space.

*UDC*'s site-specificity is not just a design element, but a core value of the piece. There's an element of care in the parallel origin story about the women tobacco workers who collectively donated light to a cathedral, and the four women artists who pool their technologic skill and aesthetic inspiration to make a work of e-lit that reflects upon this bit of local lore. "After a couple of days in Košice discussing ideas while exploring the city, taking photographs, visiting museums, enjoying the restaurants and culture," María Mencía writes,

everything came together when Milan Kolcun told us the story about a group of women workers in the tobacco factory who donated a candle chandelier to St Elizabeth's [sic] Cathedral which was still in situ, however now as an electric chandelier. This was A MOMENT OF LIGHT when we didn't need to discuss anything else. At this point, we all knew this was the story we wanted to use for our installation at the factory. We were four women artists from different countries, Ireland, Slovakia, England and Spain working at the factory, and the chandelier had been repurposed for current times. Everything fitted beautifully.

"MOMENT OF LIGHT" is a classic literary metaphor of inspiration. Here, the artists materialize that metaphor in the chandelier and in the projectors that deliver the generated images, words and sounds to the audience. The constraint of "repurposing," which was true of all works in the November 2013 show, has additional resonance with the way the chandelier itself was repurposed: from candles, to gas, to electricity. The message? Repurposing allows a thing to endure. The aural performance of *UDC*'s phonetic sounds in German, Hungarian and Slovakian disrupts the authority of the ocular, the sensory origin of "objectivity" and empiricism.<sup>149</sup> These declarations of national language—all of which were spoken in Košice at the time—are uprooted from the land itself, even from the other points of reference in that language—that is, complete words—that would make the sounds intelligible. Its dislocations mirror the precarity

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149 Tanya Clement, glossing Donna Haraway, writes: "Haraway calls the all-seeing viewpoint a singular, uncritical perspective; she calls it 'this eye that fucks the world to make techno-monsters' [Haraway 581]. Instead, Haraway proposes a feminist doctrine of objectivity that is situated as "specific embodiment" rather than a "false vision promising transcendence of all limits and responsibility."

of many women working globally today in call centers, as reproductive surrogates, in adjunct teaching positions, and many other "temporary" jobs staffed predominantly by women across the world. The "vital energy" of these female bodies is subject to an empirical, neoliberal machinery concretized through the gaze.<sup>150</sup> In the browser version, sound automatically triggers on page load: the artists have programmed the piece so that readers are confronted with what they don't know about this set of women. The *UDC* insists that these women's voices should be an omnipresent aspect of the user interface.

Phonetic unintelligibility is a form of culture jamming, a way of being present but not subject to objective correction. The aural performance of incomplete words is a baffling information stream, national languages broken into linguistic building blocks that one is given no instructions how to recombine or complete. Full words once recognized would be easy to assimilate and then to ignore. But the phonemes never cohere, because even a moment of coherence would vanish before sense could be accreted.

Mencía and Husárová collected descriptive documentation from each of the authors who exhibited in *Repurposing in Electronic Literature*. Their introduction to the volume is a "declaration" written in non-executable source code.

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> Initializing
Zuzana Husárová @ María Mencía

Repurposing of the invitation
as an explication
OR What you might have already seen

Embodied Statement of Reasons

Page = new Document();
Header=Page->addHeader();
Header->setTitle('Embodied Statement of Reasons');
Body=Page->addBody();
Body->addParagraph('This is our editorial foreword.
Hereby we wish to state that this Enter+ publication
presents the idea of repurposing in the context of elec-
tronic literature. Our editorial is a declaration of inde-
pendent usage of any literary or non-literary material
for questioning and exploring repurposing as a process
in poetic practices. Follow these rules. ');
Body->addParagraph('Signed Zuzana Husárová María
Mencía');
Body->addHeading('Give me the source!');
Body->addParagraph('This issue follows the exhibition
Repurposing in Electronic Literature that we curated
and was held at the DIG gallery in Košice, Slovakia from
2nd until 20th November 2013. ');
Body->addParagraph('The articles in this publication
consider repurposing');
List=Body->addList();
List->addItem('of the expressive means: code,
language and text');

List->addItem('of the media: (pop up, game,
memoir) book and music, visuals, text from (non)
digital environment);
List->addItem('of the status of an author as an
individual creator');
List->addItem('of the processes of creation and
collaboration');
List->addItem('of the reading processes (from
wordplay to gameplay)');
List->addItem('of programming, glossing code
and licensing');
List->addItem('of modalities (speech, sound,
e-writing)');
List->addItem('as a poetic approach');
List->addItem('as a creative practice');
Body->addParagraph('Most of the artists taking part in
the exhibition have contributed an article for this pub-
lication that reflects and connects with their work and
the exhibition's theme of 'Repurposing in Electronic
Literature'. Among these authors belong: Mark Ameri-
ka, Jason Nelson, Christine Wilks, Mez Breeze, Rui
Torres, Jörg Piringer, Mariusz Pisarski, Nick Montfort
in collaboration with Stephanie Strickland, Amaranth
Borsuk in collaboration with Brad Bouse, the creative
group R3/\|X|\|oRX and Code Interactive #2 Col-
laborative (M. Mencía, J. Naji, C. Wilks, Z. Husárová. ')
Body->addParagraph('The authors/artists were given
free license to write their articles in a style of their own
choosing. This approach enriched the publication by
gathering a variety of creative writing styles and per-
spectives in the form of notes, code and scholarly
reviews. Jeneen Naji and Leonardo Flores present a

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Figure 2: The introduction to *Repurposing in Electronic Literature* is written in the style of source code: a "declaration of independent usage."

150 I refer to new work by Kalindi Vora: *Life Support: Biocaptial and the New History of Outsourced Labor*



Their "declaration of independent usage" foregrounds materiality in an emulation of source code. In programming, a declaration is an act of naming, but it is also, in the artists' introduction, an act of will: that readers should use "any literary or non-literary material for questioning and exploring repurposing as a process in poetic practices." "Give me the source" is a heading that frames the entire exhibition. Mencía and Husárová conclude: "As a result of this the term literature is broadened and can be understood to include the use of differing platforms and media as well as experimentation with programmable languages, voice, techniques and modalities." "Programmable languages" and human "voice" are yoked together in this "declaration." The women authors appropriate the style of code as an affirmation of technical prowess and materiality, in the way that the factory women were immersed in the material production of tobacco. But such endeavors are inseparable from their specific context. Whether picking seeds out of tobacco, or rolling cigarettes, or repurposing the code from "Notes Noir," these women literally "got their hands dirty."<sup>151</sup>

Mencía, Husárová, Naji and Wilks' decision to port their installation work to the browser insists that their work should remain visible, even though a browser is a decontextualized remediation of this deeply site-specific work. Creating enduring access to an installation is a labor issue, particularly for women who, as a class, are disproportionately employed as part-time laborers in the humanities and so need the extra documentation to fortify their claims for employment renewal and pay.<sup>152</sup> The four artists all employed full-time or, in the case of Wilks, engaged in funded Ph.D. creative work; but *UDC*'s enduring online presence speaks to the practical need for women artists to leave digital records of otherwise ephemeral artwork and fight against the precarity that besets so many women working in the humanities today—of which I, for four years, was one. *UDC* is intimately bound with conditions of gender, unemployment and global migration.

*The Upside Down Chandelier* transitions from digital art to digital literature when its location moves from installation to browser. This distinction adjusts the reading apparatus from full-body sensorium to a mostly cognitive process of decoding or sleuthing. Serge Bouchardon observes in his forthcoming essay "Toward a tension-based definition of Digital Literature" [sic] that

[t]he tension between a unique object exhibited in a museum [installation] and

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151 "Notes Noir" is the collaboration between Randy Adams (runran) and Wilks (crisscross) that Wilks repurposed for *UDC*.

152 Part-time and non-tenure track faculty comprise 76% of the humanities professoriate, and at least half of these are women, according to a 2013 report from the American Association of University Professors. That means three of four humanities college instructors are or might be income-insecure, a phenomenon that extends beyond North America to Britain and Europe as well. Such faculty occupy a liminal space between professional and hourly temp worker.

a reproducible object [website] corresponds in some way to a tension between artistic creation and literary creation. This raises the question of the positioning of digital literature in relation to digital arts.

If, as I suggest above, the body is an interface for *UDC* in installation, then a guest's experience of the art flows through multiple sensory information streams. Those streams constrict to one main channel in the browser, where words are the only intelligible point of entry. The "tension" Bouchardon observes becomes "literary" when the *UDC* participant reads the words as the primary portal into the work's meaning. Absent the site-specific context of the tobacco factory, the phonemes' significance would be unintelligible sounds rather than echoes of the languages spoken by women in that particular room. Such sounds, though precisely unintelligible, were poignant. Words cannot supplement the loss of that context and the affective dimension it imparted.

## **UPSIDE DOWN CHANDELIER INTERFACE #2: BROWSER**

Spatially, words take up a large portion of the laptop or desktop screen relative to how the words would have been projected in the tobacco factory installation. In the browser, none of the physical proprioception or accidental encounters with other guests would complement and extend *UDC*'s fixed elements (sound, words, collaged images). In the browser, one decides what to search for. In installation, information flows toward one without exerting agency beyond staying in the room.

Words in *UDC*'s browser form bear undue emphasis nudges the work into digital literature rather than digital art, because the encounter becomes readerly: one's first instinct is to decode what the words mean, since the work's embodied, proprioceptive dimensions are inaccessible outside of installation. All of the twenty-seven words are site- and event-specific, referring to the women tobacco factory workers and their donated gift, the chandelier that first held candles, then was adapted to burn gas, and then finally electricity (when it was turned upside down).<sup>153</sup> Words such as "donation" ("darovanie" Slovak, "adomány" Hungarian, "Zuwendung" German) or "women" ("nők" Hungarian, "ženy" Slovak, "frauen" German) or "smoke" ("fajčit" Hungarian, "dohányzik" Slovak, "rauchen" German) appear as appearing/vanishing 3-second animations trailing across the bottom of the screen. In browser, words are the tractable element, the part that changes ways easy to parse if not understand, and so the encoun-

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153 Not all of *UDC*'s words could be translated as single words in each of the four languages. "Tabača" translates from the Slovak to "tobacco building"; it is not the same as "factory" (gyár [Hungarian], fabrik [German], and továreň [Slovak].) "Manufacturing" translates from English into phrases in the other languages. Zuzana Husárová, who translated the words, notes that "repurposing," "overnight" and "upside down" were "problematic to translate," so only the English words are included. "1851" signifies in all four languages.

ter becomes literary. What would have been "guests" at the installation transform into "readers" because that's the clearest path to making meaning of *UDC*.

I discovered that the way to "read" *The Upside Down Chandelier* was to "deform" the work by interrupting Flash software's procedurality. I'd transcribe the vanishing words into a text file so that I could plug them into Google Translate; or I used screen grab if I couldn't indicate the diacritical marks in Hungarian, Slovak or German fast enough as the foreign words vanished before my eyes. I translated all of the words, which unlocked *UDC* for me; but the process of reading was so interruptive as not to be reading, in the sense of continuously building a frame of reference, so much as decoding. I quickly discerned that the words were translations of a core set. But Google Translate detected eight languages: not just the Hungarian, Slovak, English, and German, which the authors used; but also Polish, Czech, Dutch, and Irish, which I later learned the authors did not. These mistranslations were a combination of my human transcription errors and machine errors. As a reader moving from decoding to interpreting, the mistranslations inclined me to deduce that the women working in the tobacco factory hailed from more countries than they actually did. These mistranslations were an algorithmic ghost: languages floating through the interface but emanating neither from the authors nor from the me. The translation algorithm is massively crowd-sourced and can change each time one loads it, depending on other recent searches. How much had other peoples' erroneous translations or mistranscriptions affected the Google Translate output, and so, my interpretation?

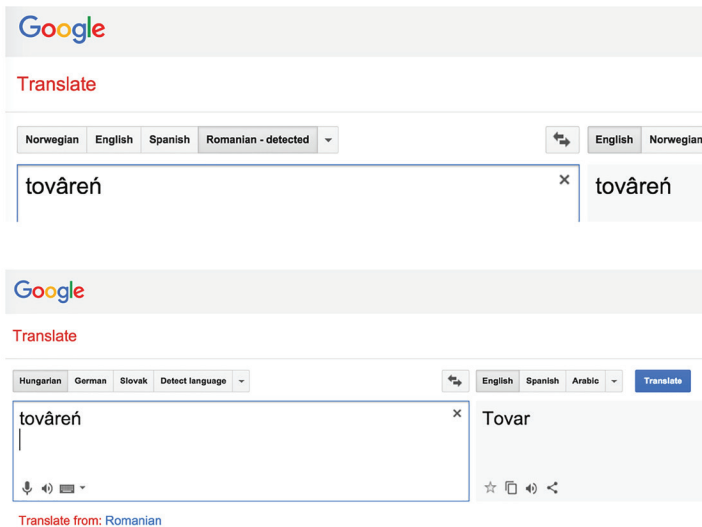


Figure 3: Google Translate was an essential but unstable reading tool I used to decode *The Upside Down Chandelier*. The same searched word was attributed to different languages and translations to English.

Translation errors became a legitimate element of my *UDC* reading experience. Google frequently couldn't identify one language but several possibilities, and I had to learn by trial and error which were the most likely choices. Without recourse to asking the authors, I would not have been able to check the accuracy of my translations. Google Translate is an unstable tool because its returns reflect the current aggregate of crowdsourced translations at moment of search. For example, the word "tovârëñ," which the native Slovakian Zuzana Husárová identifies in the *UDC* master word list as a Slovak word for "factory," yields different translation results on different days, both of them erroneous (see Figure 3). I had to "guess and check," but absent conversation with the artists, there would have been no ultimate authority to correct or guide my heuristic method.

What to make of misleading returns?

Such flaws are pernicious only if we persevere in the tradition of close reading for mastery rather than accurate if nimble approximation. Masterful reading is a luxury borne of a stable medial environment where the object is reproducible. Google Translate is a volatile tool, but that doesn't mean it's useless. Instead that we ought to adjust our expectations how we read, and our investment in textual mastery and control.

If commemoration of medially fragile works joins interpretation as the most important work electronic literature critics do, then the race is on to memorialize not just the sensory-rich and fleeting experiences of installation art, but also the many "surfaces" of Flash-authored, browser-based art that seems durable, but is not. A feminist-materialist approach to scholarly documentation could engage the broader M.E.A.L.S. framework: materiality, embodiment, affect, labor, situatedness.<sup>154</sup> Such an approach, developed by the FemTechNet collective and summarized into the memorable M.E.A.L.S. acronym by Elizabeth Losh, reckons with the ways in which readerly drives to mastery are entangled in material and commercial systems. Thoughtful description of reading interfaces is a form of feminist critique, and resistance.

*UDC* rewards the active reader who augments her reading capacity with software that deforms the Flash output: stopping the cinematic flow by capturing snippets in still images, or silencing the audio loop, or putting 75% of the piece's total text output through Google Translate, or searching for extra bits of context that might make the piece comprehensible. Without these machinic and algorithmic augmentations, The Upside Down Chandelier is surfaces that withhold deeper meaning. Like hyper-reading and distant reading, "augmented reading" is enabled by personal computing and

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<sup>154</sup> See Losh's recorded talk "#GamerGate 101: Public Spheres and Safe Spaces" at Whittier College 2 April 2015, minutes 5-8. Losh's M.E.A.L.S. acronym summarizes work on the FemTechNet collective: <http://femtechnet.org>.

networked information.<sup>155</sup> Such augmentations impart agency. But it's worth noting that the impulse to "master" every element of a literary text also participates in a larger ideological project that privileges knowledge as disembodied artifact over ephemeral performance.

In my months writing this essay, I observed how intrinsically I seek mastery when I read e-literature. Sampling *UDC* in the browser activated my bookish impulses toward mastery that in installation I would eschew or forestall. To "read" *UDC* I had to crack it open: stop it, silence it, or deform it into something other than itself in order to read it. And while I wouldn't call this violence, the process did make me grapple with what's at stake in "mastering" a text. It occurred to me, as I hunted for YouTube videos on how to decompile Actionscript so that I could read *UDC*'s decompiled .swf files, that perhaps my drive to master even the proprietary source code was borne of a bookish mental habit, and a notion of scholarly responsibility borne of print-based scholarly practices.<sup>156</sup> In pushing to know every aspect of *UDC*, I was in some ways reading against *UDC* in the manner of a detective grilling the suspect. Mastery is the sterling academic credential. But the drive to "master" the output of volatile new media environments is to import print-based modes of reading better suited to stable medial environments. With its crushing colonialist implications, "mastery" as an outcome of reading ought to give us pause.

With whom or what do we align when we seek mastery? Google exacts a price for using its services, though it's a price we lack sufficient information to tabulate. An individual user is prohibited from paying a subscription fee to Google in exchange for tracking-free access to the Google suite of tools. (Corporations do pay Google a subscription fee for use of its suite of tools.) Google parlays the gleaned information to its clients for the purposes of selling behaviorally-targeted ads pitched to users' particular predilections or vulnerabilities. Every personal search is an expression of desire, no matter how trivial or transient. As Siva Vaidhyanathan, John Cayley, Lori Emerson, and others have articulated, our digital commons is operated by a for-profit corporation

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155 N. Katherine Hayles' work on hyper attention is an analog or precondition to what I call augmented reading. Hayles' remarks on hyper attention have evolved from her 2006 essay "Hyper and Deep Attention: Generational Divides in Cognitive Modes" to her 2010 presentation at the Association of Departments of English (published in 2011 as "How We Read: Close, Hyper, Machine"), to its final form in her third chapter in the book *How We Think: Digital Media and Contemporary Technogenesis*.

156 Decompiled code is stripped of an author's grace notes. The code is functional but does not bear the specific traces of a programmer's (or code author's) language. See Reading Project: A Collaborative Analysis of William Poundstone's Project for the Tachistoscope, a book that braids humanities computing and literary criticism. Marino notes: "We should proceed carefully [in looking at code as the "depth" of a medial artifact]. Matthew Kirschenbaum and others have rightly warned against approaching code through such depth-based paradigms as 'looking under the hood.' As Wendy Chun suggests, pursuing the code in such a manner presents the search for an inner essence that is an ideological enterprise, a kind of projection" (16-17).

that withholds information about its methods and long term goals. We "augment" our reading capacity of digital literature and other medial objects through these tools, but in doing so are participating a corporate agenda, the terms of which we do not know. "We recognize digital and other technologies can both subvert and reinscribe oppressive relations of power," notes the FemTechNet Manifesto, "and we work to make these complex relations of power transparent." Such an act of reading acknowledges the limits and costs of interface "mastery."

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