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Citation: Marecki, Poitr, and Nick Montfort. "Renderings: Translating Literary Works in the Digital Age." Forthcoming in Digital Scholarship in the Humanities (March 2107).

As Published: <http://trope-tank.mit.edu/renderings/>

Publisher: Oxford University Press

Persistent URL: <http://hdl.handle.net/1721.1/107014>

Version: Author's final manuscript: final author's manuscript post peer review, without publisher's formatting or copy editing

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Renderings: Translating Literary Works in the Digital Age

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February 10, 2017. This text has been accepted to and will be submitted for publication in *Digital Scholarship in the Humanities*.

Abstract:

The point of departure for this paper is the Renderings project (<http://trope-tank.mit.edu/renderings/>) established in 2014 and developed at the Massachusetts Institute of Technology in a lab called the Trope Tank. The goal of the project is to translate highly computational and otherwise unusual digital literature into English. Translating digital works that are implemented as computer programs presents new challenges that go beyond the already difficult ones tackled by translators of more typical forms of literature. It is a type of translation akin to the translation of experimental, conceptual, or constrained works. It is not unusual for this task to require the translator or translators to reinvent the work in a new linguistic and cultural context, and sometimes also to port the original program to another programming language. This paper describes an undertaking related to the broadly understood discipline of creative computing and studies the work of the translator as taking place both in code and language, drawing from the methodologies developed by the fields of code studies, platform studies and expressive processing.

Keywords: creative computing, translations, experimental writing, platform studies, expressive processing

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Nick Montfort develops computational art and poetry, often collaboratively. He is professor of digital media at MIT. Montfort wrote the books of poems *#1* and *Riddle & Bind*, co-wrote *2002: A Palindrome Story*, organized and co-authored *2x6*, and developed more than forty digital projects including the collaborations *The Deletionist* and *Sea and Spar Between*. The MIT Press has published five of his collaborative and individual books: *The New Media Reader*, *Twisty Little Passages*, *Racing the Beam*, and *10 PRINT CHR\$(205.5+RND(1)); : GOTO 10*, and *Exploratory Programming for the Arts and Humanities*.

1. Renderings

The Renderings project was started at a time that was important in the development of electronic literature, that is, literature which involves “works with important literary aspects that take advantage of the capabilities and contexts provided by the stand-alone or networked computer.”ⁱ

The world of electronic literature, focused on the development of digital writing, is a rather young field. It was first defined in 1999 when the Electronic Literature Organization was set up,ⁱⁱ although examples of e-lit practices can be found earlier, we believe as early as 1952 (Christopher Strachey’s generator of love letters for the Ferranti Mark 1).

One of the unusual aspects of electronic literature is its independence from national book markets. It is best to understand e-lit as a new type of literary practice that is author-driven rather than publisher-driven. Electronic writing does not know the same boundaries as print publishing; it does not behave according to its logic and rules or literary hierarchies and canons. What’s more, production of electronic literature often bypasses all traditional actors in the publishing industry (publishers, literary agents, distributors).

Despite having no strict national boundaries, the e-lit field is dominated by the United States when it comes to computing and the central role of the English language in the field. This relates to the strong position of the Electronic Literature Organization, which is a US non-profit organization that brings together the most important researchers and artists affiliated with electronic literature.. It is also in the United States (although occasionally elsewhere) that prestigious community events like the E-Poetry Festival and the ELO Conference have usually been organized. These events are important to the field, because they serve as forums for presenting new works and research. Moreover, the great majority of works considered canonical for this discipline were written in English, as evidenced by the first two volumes of the *Electronic Literature Collection*, published by the ELO in 2006 and 2011 and the only anthologies of their sort. These are some examples of how English predominates in electronic literature.

And yet, recently a growing number of changes and attempts to move beyond the boundaries of the field can be observed. The best known projects include the ELMCIP Electronic Literature Knowledge Base,ⁱⁱⁱ which involves scientific description of artistic practices in many languages. This database contains information about national collections of electronic literature,

including Russian and Portuguese literatures. This is the first step towards recognizing phenomena on the periphery. The hegemonic, English-language center shapes the lexicon and the way of looking at digital textuality developed in languages other than English. This is reflected tellingly in the title of the most important conference in the field, held by the ELO in 2015. The title of the conference that year was “The End(s) of Electronic Literature” and it aimed to spotlight actors in the field who are “outside of the mainstream.”^{iv} The conference call for papers stated: “This conference will seek to shed further light on international communities and practices in electronic literature that have not been widely addressed in the critical literature of the field, those that are located at the ‘ends’ or margins of critical discourse in the field.”^v

The ELO conference in Bergen took place the same year as the E-Poetry Festival, another important e-lit event held outside of the USA and Western Europe. In 2015, E-Poetry, which is headquartered in Buffalo, New York, organized its festival in Buenos Aires, Argentina. The Spanish and Portuguese languages seemed to take a leading role during research presentations as well as artistic events. During the festival segment titled NEW PATHS, NEW VOICES / NUEVAS RUTAS, NUEVAS VOCES, a coalition was forged against the domination of the English language in the field. During a performance (an intentionally antagonistic one, dedicated to trolling) presented in Spanish and Polish and abiding by the spirit of major Internet trolling strategies, it was established that the name of the coalition would not be announced in English and the performance also was expressly forbidden from being translated to English. This was a gesture aimed at opposing the most significant type of domination in the field – namely, language domination and all the hegemonic practices that stem from it. It was a move modeled after that of the Coalition against Gringpo^{vi} and assumed this sort of trolling approach as a reply to having languages and practices identified as being at the “end(s).”

These most recent examples of decentering also include an anthology of digital literature, the third volume of the *Electronic Literature Collection*, overseen by four editors: Stephanie Boluk, Leonardo Flores, Jacob Garbe, Anastasia Salter. In this anthology, languages other than English are better represented than in the first two volumes and other anthologies.^{vii}

In this context the Renderings project pioneered research that confronted the challenges connected to the translation of digital works, especially those that are highly computational and otherwise unconventional. It is important to underline that the Renderings project involves researching global, non-English literatures and translating chosen works into English (thus, working against dominating tendencies). The Renderings project was developed by the Trope Tank at MIT, an unconventional laboratory for research, teaching, and creative work, that gathers researchers from many language and cultural contexts. Its members “not only employ established literary translation techniques, but also consider how computation and language interact. Literary and computational experts worldwide participate.” The initial team included Nick Montfort (the initiator and leader of the project), Patsy Baudoin, Andrew Campana, Sally Chen, Aleksandra Małecka, Piotr Marecki, and Erik Stayton. During the project’s first year, thirteen translations or bilingual works by twelve authors were produced in the following languages: Chinese (1), French (3), German (1), Japanese (4), Polish (2), Spanish (2). At present, the published works include: *Automation* (2013) by Andrew Campana, *Contemporary Japanese Poetry Generator* (2012) by Shinonome Nodoka, *Dizains* (1985) by Marcel Bénabou, *Hallelujah* (2012) by ni_ka, *MAZ - Mutantist Autonomous Zone* (2014) by Mathias Richard, *Poem 21* (1988) by Amílcar Romero, *Poet* (2003) by Michał Rudolf, *Sample Automatic Poem* (2009) by Félix Remirez, *Seika no Kôshô* (2013) by Andrew Campana, *Shanshui* by Sally Chen, *Speeches* (1993) by Marek Pampuch, *Tôte das Gedicht* (1997) by Johannes Auer and *Triolets* by Paul Braffort. The programming languages of the original works include BASIC, Perl, Processing, and JavaScript^{viii}, selected to represent the wide variety of genres of electronic literature and creative computing and the production of cultures/literatures currently not well-known in this predominantly English-language field. Thus the first Renderings set of works includes genres characteristic of specific cultures, such as Japanese “monitor poetry” (bursting with flowers, hearts, and other graphics dense enough to obscure the screen), a Polish generator of communist speeches, electronic “landscape poetry” from China, and works from the Oulipo offshoot ALAMO (France).

In 2014, the magazine *Cura* presented thirteen translated works, the first phase of the project^{ix}. Decisions about whether and how to make the original version available alongside the online one had to be made for all works translated in the project, as each case was different. For instance, *Poem 21* (from Argentina) was published using a Commodore 64 emulator rather than in a JavaScript port to the Web. This piece has unaccented capital letters that might look odd when typeset in a more traditional way on the Web, or might require editorial intervention, but that, thanks to emulation, can be accessed in a way that is similar to the original platform presentation. Respecting platform specificity and platform consciousness is for us a crucial element of the project. This makes the translator of the work its perfect user. As understood in expressive processing, a perfect user is a student of not only the output, but also of the problems in the process. The translator not only translates the text, but also engages with the code, platform, and porting.

The project aims to treat the so-called margins (or “ends”) of digital culture seriously, exploring the previously overlooked and abundant amount of work using computation and language art from around the globe. This is one of the first research projects open to this type of inquiry in the area of media archeology. We believe that through such activities we enrich the field of digital media and introduce it to new aesthetics and sensibilities.

2. Translating from English – Language Domination

When considering translations of electronic literature, on several occasions it has been confirmed that there are dominating strategies and tendencies. Most published translations involved translation from English into some other language. In 2012, a conference Translating E-Literature was organized

at Université Paris 8. One of the aims of the meeting was to discuss the translations of *afternoon, a story*, a classic hypertext novel by Michael Joyce, from English into French by the OTNI (Objets textuels non identifiés) team. Mariusz Pisarski, a Polish e-lit researcher and translator, presented his paper on the finished Polish translation of Joyce's novel, discussing porting it from Storyspace, software developed in the 1980s for creating hypertext works, to modern web browsers.^x A particularly interesting entry, grounded in practice, was the report by Natalia Fedorova and Nick Montfort, "Carrying across Language and Code," which discussed translations of textual generators.^{xi}

An ambitious enterprise in the field of translating e-literature was Mariusz Pisarski and Monika Górska-Olesińska's Polish rendering of *Sea and Spar Between*,^{xii} in which they translated a large algorithm based on Emily Dickinson's poetry and Herman Melville's *Moby-Dick* put together by Stephanie Strickland and Nick Montfort. The authors of the translation chose to use existing Polish translations of these works and dealt with their particularities, adapting Polish grammar to the formal constraints of the generator. A different type of translation practice is involved in translations of multimedia works, like kinetic poetry. A review of translations of kinetic poetry was posted by Leonardo Flores at <http://iloveepoetry.com/?p=11426>. There he discusses three versions/translations (in English, German, and French) of a video poem by Young-Hae Chang *Heavy Industries* (each version involves sound, textual, and rhythmical elements). A similar approach to total translation is taken by Aleksandra Małeczka in her translation of the kinetic video poetry volume *Conduit* by Katarzyna Giełżyńska, in which she translated around thirty short digital works involving sound, editing, text, and image. As a result, the translations often focused on a concept and included new aspects of sound and image.^{xiii}

It has to be emphasized that the study of translation within the field of digital media is still in development. The above-mentioned initiatives and translations are positive examples, albeit exceptions. The majority of electronic literature works are read in the original language, which most often is English. This is an unquestioned status quo of the constantly evolving digital media field.^{xiv}

3. *Speeches* - A Case Study

This section focuses on one particular work, the Polish text generator *Speeches* from the early 1990s. We will describe the program's functioning, and put forth that the electronic work has several layers, including the input, procedure, and output. We also assume that the translator and reader should be actively aware of these layers. Another significant aspect of the project which we are going to discuss is porting programs between platforms. The translation of a digital work is not only a matter of language, but also requires awareness of the code and the platform for which it was designed. Especially in the case of older works, the translator has to consider porting the work to a platform more accessible to the contemporary reader. By focusing on the specific translation process of one digital work, we draw attention to the method worked out by The Trope Tank, and especially the Renderings project. We point to the differences between a traditional translation and that of a digital text (including working with codes and porting, decisions about the publication platform of the work) as well as the role of the translator. It was deemed justified to present the method and the above-mentioned differences on the basis of one case study, even if translation from various programming languages and platforms demands making decisions that consider the specifications of the platform, which in our minds is an integral part of the digital work.

These differences allow for innovation in the field of literary translation. Given the goals of the project, it seemed justified to port the programs to JavaScript in order to publish it online, to provide readers on the Web with easier access. When doing so, the translator has to preserve as many aspects of the program's functions as possible in the original programming language, although certain aspects of digital materiality are sure to be lost. This relates to changing the platform from the one that was originally used. Platform consciousness and platform description are described according to the methodology developed by Nick Montfort and Ian Bogost in books from the Platform Studies series published by MIT Press. It is a method that "investigates the relationships between the hardware and software design of computing systems and the creative works produced on those systems."^{xv}

The Renderings project was developed based on different types of exploration and work, including research into Polish digital literature. During that inquiry, we stumbled upon an 1993 issue of the *Amiga* magazine. This particular issue was dedicated to the phenomenon of *grafomania*, which in Polish means compulsive writing of poor quality. In one of the articles the editor-in-chief of the magazine, Marek Pampuch, presented an ironic formula for winning the Nobel Prize with the help of an Amiga computer and algorithms. Pampuch offered prompts, which, after development, could become material for the Nobel Prize Committee's consideration. In the article there are a few examples of literary works for the Amiga computer. Pampuch dedicated the first one to politicians. He wrote: "We know that the level of intelligence of our leading politicians only allows them to read out something already written by someone else"^{xvi} The author underlined that there is no difference between speeches from the communist period, which in Poland ended in 1989, and the speeches of the politicians from 1993. He noticed a certain regularity, which allowed him to determine 4 elements that compose every sentence. These elements include:

- a reference
- a development
- a cause
- an effect.

"This is the perfect task for a computer to show its prowess. We just need to group the elements with data, and then randomly mix them with each other, obtaining speeches that have as much sense as those pronounced by our leaders."^{xvii}

This generator, discovered once again many years after the publication of its code, is proof that Pampuch mastered the tricky art of imitating the kind of political discourse which in Polish is called “grass talk” or “empty talk.” The algorithm perfectly fulfills its stylistic constraints, generating a text that does not have to carry any definite content or message.

Pampuch provides a short program written in Amiga BASIC:

```
REM przemówienia
DIM p$(4,10)
FOR a=1 TO 4
FOR b=1 to 10
READ p$(a,b)
NEXT b: NEXT
10 PRINT „Towarzyszki i towarzysze!”
PRINT
FOR a=1 to 10
FOR b=1 to 4
30 q=INT((RNDI1)*10)+1
if q=11 THENT 30
33 PRINT p$(b,q)
NEXT b:PRINT
NEXT a
REM tu będą dopisane dane
```

He invited readers to develop and modify as they see fit. “When including new text, remember to change the size of the table and the loop counter accordingly (DIM or FOR... TO in the instructions).”^{xviii} The example given by Pampuch has four elements, ten lines for each type of element.

Pampuch goes even further. Alongside *Speeches* he proposes Nobel-winning formulas for prose and poetry. He also encourages readers to undertake creative endeavors, since even “after the hardest battles with the joystick, a little intellectual entertainment can do some good.”^{xix}

Pampuch’s Nobel-winning formula was never used, at least to win an actual Nobel Prize. The author never published a generator in digital and machine-readable form, and there is also no mention of public showings of this work. There were however some remixes and reworkings. The creators of one of the most interesting Polish generators, *Turbo Wieszczy* [Turbo Bard] drew inspiration from his algorithm, although they modified it and did not acknowledge Pampuch in the credits. Pampuch himself does not seem to have cared much about the further fate of the work after his article was published. It appears that he did not perceive the algorithm as a literary work, or at least as an enduring one.

For a long time the only medium by which *Speeches* was transmitted was the 1993 issue of the Amiga magazine. From this magazine, the code was typed in (as originally intended) more than twenty years later. It was then run, with some modifications, in a BASIC programming environment. First, we typed in the Amiga BASIC code, testing a modified version of it in a modern-day BASIC interpreter running on GNU/Linux. In fact, rewriting the algorithm from the printed piece of paper and running it in BASIC environment seemed to be the only way of accessing the work. We translated the 40 different segments of the text of *Speeches* into English and adapted them to the requirements of English grammar. We then decided to port the program to JavaScript. Instead of discussing what was lost in this processes, we prefer to base our discussion on detailing what was preserved of the work.

The system is described in the article and clearly implemented in Amiga BASIC, so there was no question about how it worked and how to create a similar Web version. It is straightforward to create the same general sort of typography (upper and lowercase letters, special Polish characters) on the Web as it was on an Amiga computer. In developing the English Web version, we used English variable names; these names are in Polish in the Polish Web version. For instance, the function `zero_do_dziewięć()` in the Polish version is called `zero_through_nine()` in the English version. We did this to facilitate the study and modification of the Polish version by Polish speakers and to allow for the same possibilities with the English version and work done by English speakers. Polish speakers who do not know JavaScript are nevertheless at a disadvantage, because the JavaScript programming language uses keywords that are taken from English.

With every aspect there is something to be lost, in terms of context (that of early computer magazines with their variety of programs and articles, for instance), language, platform, and the different literary/theoretical aspects of the works. No translation can be lossless, so it’s more productive for the researchers to ask about what can be carried across. For instance, with *Speeches* people can see a program that was published in 1993 and understand a bit more about how computing and the cultural and political situation interacted in Poland at the time. Of course there are aspects that are “lost” or not carried across. For instance the user does not type the program in and run it (they just click “Reload” instead). But importantly, there is *something* meaningful that is brought over.

A sample output generated by the translated program reads as follows:

“Comrades, ladies and gentlemen!

“50 years of arduous struggle, work, along with law and order, presents an interesting test in the evolution of the system of axioms which is the chicken in every pot.

“Observing, as we note, that a steady increase in the numbers and activity of our membership supports us in the preparation and implementation of the process of international detente.

“We are convinced that a steady increase in the numbers and activity of our membership requires vigilance and propaganda on the topic of the attitudes of comrades towards Party goals.

“When we reject the deviation of the previous government, the eradication of certain ingrained habits helps to solve the swelling problems of the necessary advance of the party leadership and the government.

“Contrary to the snide rumors from the right, surmounting the economic difficulties we inherited from our predecessors plays an essential role in shaping the attitudes of comrades towards Party goals.

“Observing, as we note, that the implementation of the tasks outlined in our program appears to enable the advancement of the direction of a progressive upbringing.

“Only arduous work or work, along with law and order, requires vigilance and propaganda on the topic of the direction of a progressive upbringing.

“50 years of arduous struggle, surmounting the economic difficulties we inherited from our predecessors obliges us to consider the process of international detente.

“Contrary to the snide rumors from the right, surmounting the economic difficulties we inherited from our predecessors helps to solve the swelling problems of the direction of a progressive upbringing.

“When we reject the deviation of the previous government, work, along with law and order, it appears to enable the advancement of the rights of the members of our Committee.”

In order to fully understand the process taking place in the generation of *Speeches*, we translated parts of the code (function names, variable names) that are responsible for particular functions. The target-language user of the work can also find it easier to get acquainted with its code in the same language in which they read the literary output of the program.

We have also made important decisions as to the publication of the work. Our aim was to make it available for a wide audience and publish it online. However, we did not forget to upload the original article by Pampuch, which can be found alongside *Speeches* published in the online *Cura* magazine^{xx}.

The role of the translator of course changes in this type of work. In traditional works, the translator is often invisible, a background figure, sometimes subtly credited or even not mentioned at all. In the case of digital works, the translator becomes visible, an ambassador of the work, often explaining its mechanism and the translation process. They quite frequently act as the editor of the work (also in terms of deciding about the target platform and mode of presentation), or even its agent (presentations at festivals, etc.). In the case of the discussed piece, it was translators that gave *Speeches* a second life, which managed to reach a broader literary context beyond local press that dealt with computer science. They were presented at prestigious events dedicated to digital media. (Examples of such presentations include the keynote speech at the “Le Sujet Digital 2015 conference held at Paris 8 on November, 2015, the P2P: A Comparative Exhibit of Experimental Polish and Portuguese Literature in Print and the Digital Era exhibition held in Bergen, Norway) July 4-8, 2015 or even during the Polish Impact Festival in NYC at the Central Booking Gallery that took place September 22 - October 2, 2016). At these events, translators, also experts on digital media, presented the pieces for the public.

4. Conclusion

Experimental literature is always created in a certain socio-political context and in response to specific social problems (as with the Dadaists’ reaction to World War I). With this understanding, it is clear that the digital literature developed in the US using equipment and technologies and sponsored by the American government and army may have completely different aesthetic qualities than experiments and phenomena developed in the countries behind the Iron Curtain and in the Eastern Bloc in Europe, where computers used to be sold only in special shops with Western products and legal software was largely unavailable. Such conditions had to have an impact on the field of creative computing. These and other issues have not yet been studied; the Renderings project is one of the first attempts at specifying research questions and drawing attention to the different contexts of creative computing.

The global development of computational literature, in postcolonial as well as other nations, is already proceeding. Because of how limited existing translation work is, however, there is the false impression that computing is used for literary purposes only in the most well-known, powerful, and post-industrial nations. We hope that Renderings will not only supply a body of work that shows compelling global engagement with computing and language; we hope that it will also encourage others to undertake these sorts of translations.

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Notes

ⁱ <http://eliterature.org/what-is-e-lit/> (accessed 10 October 2015).

ⁱⁱ Rettberg, S. (2009) Communitizing Electronic Literature, *Digital Humanities Quarterly*: 3.2.

ⁱⁱⁱ elmcip.net/ (accessed 10 October 2015).

^{iv} ELO Conference, “The End(s) of Electronic Literature” Bergen, Norway August 5–7 2015.

^v <http://conference.eliterature.org/2015/call/> (accessed October 10 2015).

^{vi} gringpo.com/ (accessed October 10 2015).

^{vii} The project of the anthology was presented in Bergen during the conference “The End(s) of Electronic Literature.”

^{viii} Three of these works (two Japanese, one Chinese) are “bilingual,” written in two languages by the authors and originating in non-English languages.

^{ix} <http://curamag.com/issues/2014/11/30/renderings> (accessed October 15 2016).

^x <http://elmcip.net/event/translating-e-literature/> (accessed 10 October 2015).

^{xi} http://nickm.com/trope_tank/TROPE-12-04.pdf (accessed 10 October 2015).

^{xii} The authors of the translation demonstrated the translation process step-by-step in their report presented during the ELO 2013 Conference in Paris, cf. Pisarski, M. and Górska-Olesińska, M., On Polish translation of *Sea and Spar Between*. <http://elmcip.net/critical-writing/polish-translation-sea-and-spar-between/> (accessed 10 October 2015).

^{xiii} Presented during the ELO Conference in 2014 in Milwaukee.

^{xiv} Three of these works (two Japanese, one Chinese) are “bilingual,” written in two languages by the authors and originating in non-English languages.

^{xv} Bogost, I. and Montfort, N. Platform Studies: Frequently Questioned http://nickm.com/if/bogost_montfort_dac_2009.pdf (accessed 10 October 2015).

^{xvi} Pampuch, M. (1993). Jak dostać Nobla?, *Amiga*: 11, p. 24.

^{xvii} Pampuch, M. (1993). Jak dostać Nobla?, *Amiga*: 11, p. 24.

^{xviii} Pampuch, M. (1993). Jak dostać Nobla?, *Amiga*: 11, p. 24.

^{xix} Pampuch, M. (1993). Jak dostać Nobla?, *Amiga*: 11, p. 24.

^{xx} https://s3.amazonaws.com/curamag/renderings/speeches/pampuch_amiga.png (accessed October 15 2016).