TRANSLATING TO DIGITAL: WHAT CHANGES WHEN NOTHING CHANGES?

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In a short essay from 1932, entitled 'The Homeric Versions', Jorge Luis Borges said of translation that:

> The model to be imitated is a visible text, not an immeasurable labyrinth of former projects or a submission to the momentary temptation of fluency. Bertrand Russell defines an external object as a circular system radiating possible impressions; the same may be said of a text, given the incalculable repercussions of words. Translations are partial and precious documentation of the changes the text suffers…. To assume that every recombination of elements is necessarily inferior to its original form is to assume that draft nine is necessarily inferior to draft H — for there can only be drafts. The concept of the 'definitive text' corresponds only to religion or exhaustion. (69)

I would like to unpick this assertion, of the impossibility of definitiveness in both text and translation, and begin to suggest that it might also apply to a new form of versioning across media, one that we are seeing with the increasing digitisation of the book form on computer screens and devices such as the Apple iPad, and the Amazon Kindle, digital apparatuses which have, thanks to the hype from various popular media, become totemic of our turn toward reading digitally. If we consider these movements of texts across the boundaries of materiality and form as acts of translation then we can, via Borges' statement above, come to see them as — perhaps benignly — damaging mutations, a stance which might go some way to explaining the resistance to digital texts that is becoming increasingly prevalent in popular media commentary.

So what does Borges say first? That translation aims to model a 'visible text', a cohesive object, rather any 'immeasurable labyrinth of former projects'. This notion of the original work to be translated being somehow coherent in and of itself, as if no drafting had occurred, and

continued to occur, plagues traditionally linguistic translation studies. Exactly what is it that is being translated? In the loosest terms of the debate are we trying to access an exacting word for word replica, or accept the impossibility of a literal translation and instead attempt to convey the intention, meaning, or 'feel' of the original via appropriate analogues in the new language? The digitisation of written texts, I would like to suggest, is a form of translation because it asks the same question of script, of the written or printed word. What is being converted/translated? Is literal translation possible? And what are the analogues we might deploy in the new form? As the new media literary theorist Katherine Hayles states this formulation of that old problem:

> By and large literary critics have been content to see literature as immaterial verbal constructions, relegating to the specialized fields of bibliography, manuscript culture, and book production the rigorous study of the materiality of literary artefacts…. It is becoming overwhelmingly clear that we can no longer afford to ignore the material basis of literary production. Materiality of the artefact can no longer be positioned as a subspeciality within literary studies; it must be central, for without it we have little hope of forging a robust and nuanced account of how literature is changing under the impact of information technologies. (19)

As books are scanned or otherwise reproduced for new digital media the question of translation, then, becomes a question not of language, but of embodiment. When we take from paper and give to the screen, when we seem to take a text's body away, what damage do we cause? (A translation is always damaging after all, to the 'purity' of the original text if you're a Romantic, or to the illusion of this purity if we follow Borges' line.) This fear of damaging the text seems to be at the root of the most commonly heard protests against reading on a computer screen or a dedicated electronic reading device, the but–I–can't–read–it–on–the–beach/in–bed/in–the–bath arguments: the bound–book is perfect, why deprive the words of such a form? It is as if a translator had hampered themselves by refusing to use a certain tense — materiality is available and desirable, why not deploy it?

This message of perfection stems from the bound–book's coming to stand for something as an artefact: a paper book now *represents* knowledge, rather than just containing it, and its fixed coherence,

completed and separated from the world by its covers, assumes a projection of a definitive truth. Espen Aarseth reveals this in a simple thought experiment:

> Imagine a book in which some of the pages appear to be missing, or the print is unreadable every 16 pages, or some of the pages are repeated while an equal number omitted. Even if this copy is the only one we ever see, we automatically assume that it is not supposed to be this way and that a more correct version exists…. In short, we prefer the imagined integrity of a metaphysical object to the stable version that we observe. (764)

So fervent has our belief in the codex form become that any deviation from our expectations that we encounter become written–off as broken or tampered with. The book is *a priori* perfect. Maybe it's because we think of books as implicitly related to the *human* body, that to disrupt, or rob them of such would feel somehow barbaric. Books have chapters, from the Latin for head, *caput*, whilst pages have feet for their footnotes. The book's body has a spine, and their contents can have an appendix. Even references to sections being 'above' or 'below' rather than 'shallower' or 'deeper' suggest it should be standing on its feet. This does not, however, seem enough of a reason for why so many people are aghast at the idea of the translation of works to digital simulations. The quote from Aarseth above, however, gets closer to the heart of the matter, suggesting that the bodies of books have an impact of their own, independent from their content, one that has come about through constant use and re–use of a gestalt of discreet elements. When we version their content across to digital forms, a metamorphosis occurs in the text which unavoidably changes the body involved, and then we meet a lack, a lack of history, and a lack of practice. The success of the codex stems from its familiarity, but the first questions we must ask of digital texts stem from their diverting newness: how do we read an established text in an unestablished form? Should we read differently? *Can* we read similarly? What are the rules of interaction?

Perhaps, then, the appropriate explanation for the resistance to digital versioning might come from explorations in the science of touch, the *haptics* of reading. The shape of the bound book may have come to pass through mere ergonomic coincidence — thin pages for lightness and compactness; binding in leaves instead of scrolls allowing the ability to browse; thick covers for protection, these things are logical — but the

continuation of the form enriches this logic. When we learn how to read we are informed by the generations of people who have written, read, and researched before us; in this manner Sven Birkerts, in his article 'Resisting the Kindle', discusses codex reading as existing as part of an interacting system. He describes the structure of libraries and filing that have grown up around the bound–book form, but he also describes how our bodies gain access via participation: 'that system', says Birkerts, 'stands for the labor and taxonomy of human understanding, and to touch a book is to touch that system, however lightly'. A threat to the body of the book seems akin to a threat to the acquisition of knowledge. Birkerts knows what it means to touch a book: he suggests that the project of digitisation, total digitisation, would be to undo these established systems where we can interact with 'the labor and taxonomy of human understanding' via our tactile interactions with material texts.

This seems to ring true, but we can take it further — a huge amount of human understanding *derives* from haptic experience. We interact with the world via touch, and always have: from primates' becoming– one with the forest canopy as they travelled, each brachiating limb extending out and amalgamating with the drooping liana, to the invention and mass deployment of hammers and other simple hand tools which extrapolated the skills of the naked arm, our species' dramatic evolutionary history is based around touch and what the neurologist Frank Wilson describes as 'incorporation'. To incorporate something into ourselves requires that we treat an external object as if it were a part of our flesh — or to recognise and accept it as such if we are to use the Merleau–Pontian term intentionally. Heidegger would have called this 'ready–to–hand', the melting away of the perception of an object leaving only the *use*, and this idea crops up frequently in discussions of technology (98). Walter Ong, for instance, documents the notion in *Orality and Literacy: The Technologizing of the Word*: 'intelligence is relentlessly reflexive, so that even the external tools that it uses to implement its working become "internalised", that is, part of its own reflexive process' (Ong 81). Or, if that's too sedate an appraisal, Marshall McLuhan, quoting Blake, describes a similar effect:

> When the perverse ingenuity of man has outered some part of his being in material technology, his entire sense ratio is altered. He is then compelled to behold this fragment of himself 'closing itself as in steel'. In beholding this new thing, man is compelled to become it. (265)

If we blend these assertions of Ong and McLuhan we can see a more complete picture: that as our simian ancestors amalgamated themselves with their environment, we now both build and shape our environment with artefacts which, once out there in the world, we must then recognise, and draw–in as aspects of ourselves. When we see these things, these parts of us, they produce an effect on our actions as we interact with them, shaping us in return. The created object becomes a distorting mirror whose image we attempt to mould ourselves toward — incorporation, like any interaction, is never frictionless, and rarely neutral to our sense of ourselves.

We might relate this assertion to 'The Extended Mind', an essay by the philosophers Andy Clark and David Chalmers. In that work they demonstrate how our interactions with objects might alter the locus of cognition from a place inside our heads to somewhere out there, in the world, forming a 'coupled system' between human and object 'that can be seen as a cognitive system in its own right'. In a simple example they discuss the use of pencil and paper to jot down lecture notes, to do a hard sum, or to take a long list, all tasks which the human mind alone could not perform accurately. Cognition, at this point, is spread onto the paper and pencil, it forms an extension of the brain's own short–term memory.

So not only do we bring aspects of our world into a symbiotic relationship with what we might refer to as 'ourselves' — and potentially, if we side with Clark and Chalmers, extending that term outwards, 'radiating possible impressions' to draw on Borges' paraphrase of Russell — we also affect our learning via these interactions; as suggested above our hands' interactions with, and our brain's contemplations of the world are intimately and reflexively linked. Again, Wilson's work in *The Hand* marks a fantastic entry point to this field, but contemporary research into gesture and pedagogy also seems to support the continued impact of such assertions. Psychologists from the University of Chicago studied a class performing maths problems such as 3+2+8=BLANK+8. The students had to learn to resolve the equation by finding the single digit which is equivalent to 3+2, i.e. they must understand the concept of 'grouping' — adding numbers together to produce an analogue which balances the sum. In order to teach this act of 'grouping' tutors were getting students to draw a little 'v' shape with their finger under the '3+2', physically tying the digits together. Sure enough students understood the concept significantly faster than when the technique was not deployed. But the researchers also found, over the course of the study, that if the students drew the 'v' in the 'wrong' place, tying the '2+8' for instance, then there was still a marked improvement over those students who didn't use any gestural grouping method; the

very act of making the gesture introduced and sublimated the concept. Susan Goldin–Meadow, the lead author of the paper 'Gesturing Gives Children New Ideas About Math', said of the results that 'children were thus able to extract information from their own hand movements. This process may be the mechanism by which gesturing influences learning' (270).

So what are the implications of these twin assertions, that the mind assimilates external objects it uses frequently, and that hands and brains have always worked closely in tandem, what are the implications for our problems of translating to digital, or of worries that we might no longer read our books in the bath? Perhaps most importantly processes which have shaped us for hundreds of thousands of years should not be ignored due to the emergence of new technologies whose R&D time is measured, on average, in months. Part of what Birkerts, and others, might be mourning then, is that it may seem that we are taking our hands out of reading through digitisation, removing our 'tactile observation', as it were, and introducing a uniquely human kind of blindness. Tales of blindness, of Milton, to use a literary example, or of Nietzsche, of Joyce, or of Borges himself, for all of their ability to shock us with our own fragility, hold none of the horror of a true loss of touch, not just a numbness of the hands, but a removal of the skin from our sensation. To touch is never in our control — we touch against our will — always forced to maintain at least a point in pressure with something, hence our fascination with acrobatics, zero–gravity, or the weightlessness of floating in a heavily–salted sea, though none of these represent a true, total loss of touch or else they would become grotesque. Touch is never in our control, but for the most part it is controlled. We might think of pain as excessive touching, or the echo of a misplaced touch. We see the most important aspects of our world with our hands, our skin. No wonder that so many avid readers, so many holders of printed books, feel that they must speak out — do they not subconsciously fear that the new technology might make us, if not paralysed, then haptically blind?

This argument holds of course, only in a world where bound–books disappear entirely, a state of affairs which seems unlikely to come about anytime soon. If we slowly build a history for digital reading then there seems little reason to suspect that we might not imbue screens with the same richness as paper pages; it is, after all, what we do: we make objects, we use them, we become one with them, and we make them sing. As long as material books sit alongside their virtual counterparts for a time, corralling our greater excesses by revealing their fledgling weaknesses in juxtaposition, then our tactile interactions with data won't wither, and we can start to explore what might be gained with the

possibilities digitisation opens up for access, interaction, and preservation.

But what might be the immediate effects of reading works translated across mediums? Let's return to the Borges' quotation and what he says of Bertrand Russell, that 'Russell defines an external object as a circular system radiating possible impressions; the same may be said of a text, given the incalculable repercussions of words'. When we translate from physical to digital we do not, and cannot preserve the *text*, we transfer the *script*, the raw writing. We need to readjust our idea of what 'text' means in light of this movement, and Russell's external objects seem a perfect starting point: 'systems radiating possible impressions'. If the text, to all intents and purposes, has no body if digitised — and I'm not sure that this can be true alongside Mathew Kirschenbaum's forensic studies, or the ridiculousness of suggesting to people who manufacture computer components for a living, that they are making non–physical media — but if we were to assume a lack of corporeality, and see the script as only a part of the textual interaction, then we might begin to see 'text' as the situation which surrounds a reading experience, the factors that cluster around a script. Why isn't a scan of a book page the same as a printed version? Because the text is the script combined with our time, our place, our space, history, artefact sublimation, phenomenological experience, the ontology of the apparatus, and so on, and so on. A text emanates outwards from the script to encompass the artefact's and the reader's histories which exist in symbiotic feedback loops constantly affecting one another. This should come as no shock because, as described above, this is how we've always interacted with our environments: we manipulate them, incorporate them, and adjust to them. Texts are a part of our environment, and every interaction is a one–off educational linkage. Every vine the ape swings from tells it something more about the world and about itself, whilst simultaneously solidifying the general experience of interacting with vines. Every digitised book we read tells us more about digital reading and our responses to it, whilst solidifying a continuum of our reading history.

It is the baggage of bound–book reading that we bring which may cause many to view the translation to digital as somehow 'unnatural'. In much the same way as we might look at a typical countryside image and think that it is 'natural', forgetting the centuries of human landscaping that have often gone into its construction, so many readers consume printed books and report that they appear to model their thoughts accurately. Perhaps, they *should* have asked if their thoughts have in fact been modelled to fit the printed page. As Sergio Cicconi puts it:

> Chirographic writing, and, later, typographic writing, [has] strongly modelled the organization of our thoughts, so much that now we tend to think of the linear and propositional structures of printed books as the most faithful representations of the way we organize thinking. But in spite of the paradigmatization of the 'printed–thought', a printed text is a very vague (and artificial) approximation of the flow of our thoughts. (38)

We think in a 'print' way, in a physical–book way, not because that's our 'natural' way to think, but because our society has developed an affinity for codex reading, with structures in place to select for its specific strengths. This has modelled our minds, and also our culture, so that organised, linear thought has long been prided as intellectually superior, as a sign of the brain working at its peak. Whilst there is no doubt that organising one's thoughts into a cohesive narrative is useful, and often essential, to suggest that it is our default, or even most productive state is a folly sustained by the equating of mental efficacy with the inflexible drive forward of the printed word. Thought, as evidenced by our speech and behaviour patterns, is endlessly recursive, recombinative, error–laced, and imperfectly situated in networks, not cut off and preserved in a glorious perfection.

This teleology of the printed work is not part of the history of computing we now bring along with us to the work on screen, however. For most of us, digital reading has thus far been performed online in a sea of disparate webpages and hyperlinks. How could we read a novel on such a surface and not be affected? Writing, originating in the mundanities of cattle counting, was never meant to be anything more than functional. Visual art, and varieties of dance, poetry, and storytelling were the abundant forms of expression and preservation of information those few thousand years ago before writing was created and standardised, and to think that these 'imperfect' forms might be usurped by the scratchings of the first Sumerian accountants would have been, initially, untenable. The unpredictable factor, however, was writing *media*'s ability to affect the ways in which we think. Writing alters the minds with which it interacts because it doesn't remain apart, it is interiorised like any other tool; writing spaces are sites where ideas move in both directions: writers are written upon, readers feel themselves read.

Put bluntly, if we suddenly got to view a favourite film on the pages of a book would it really feel like the same film we watched on a television or a cinema screen? The book could never function as a leafed

TV, its history sits too proudly in its form as we receive it, and we also experience our own history within that form. The film on the page would have all of this weight to contend with, and we can assume the content might well buckle under such forces.

Putting these thoughts into practice, let's take a brief look at one aspect of reading digitally which stands for the complexity the screen is able to produce over the page: the hyperlink, a device which Steven Johnson has described as 'the first significant form of punctuation to emerge in centuries'. Why might Johnson describe them as a form of punctuation? Because a hyperlink, an underlined blue word in an otherwise familiar page of script, even if unclicked, still has power, still has an effect. It exists to remind us that we can head out into other texts, out into the world, that where we are is not the final say, and that the boundary lines we have revered in print are blurred at best, and potentially inconsequential. As Borges' philosophy of translation encourages us to appreciate each version of a work as a draft, rather than a corruption of some perfect originary text, so the hyperlink removes the fear that we might destroy a script object by altering it, expanding it, or moving in greater or lesser proximity to it. After all, if we don't like the results of our play, then we can always return to previous iterations; we have no physical object to affect, only multiple versions, multiple drafts, multiple *translations*, with varying degrees of authorial involvement, and the threat of an ur–text reduced to a dull murmur.

When a word is a hyperlink, that blue text might as well be the blue of a special effects screen on a Hollywood movie set, a site of infinite possibility for inscription. In the webs of text online, hyperlinks chart an authored path, whilst simultaneously reminding us that with Google only ever a few clicks away we could always break out from the text we're reading to wash ourselves in information whose connections are of a much more arbitrary, or self–authored variety. That *promise* of hyperlinks now exists, as part of their history, in all digital texts, whether they appear online or not, and this weaves a gentle magic, existing as a fundamental, conscious or unconscious breakdown of the privileging of the author, and the immutability of bound paper text; hyperlinks have become incorporated.

George Lakoff and Mark Johnson argue that when we have an experience we attempt to attach a gestalt — in their usage a collection of micro–assessments which we experience as an assemblage more often than we experience them in isolation — to that event in order to ascertain how we should act. For instance:

being in a conversation is a structured experience. As we experience a conversation, we are automatically and unconsciously classifying our experience in terms of the natural dimensions of the CONVERSATION gestalt: Who's participating? Whose turn is it?… What stage are we at? And so on. It is in terms of imposing the CONVERSATION gestalt on what is happening that we experience the talking and listening that we engage in as a particular kind of experience, namely, a conversation. When we perceive dimensions of our experience [of an exchange] as fitting the WAR gestalt in addition [i.e. the conversation feels combative with ground to be won or lost, etc.], we become aware that we are participating in another kind of experience, namely, an argument. It is by this means that we classify particular experiences, and we need to classify our experiences in order to comprehend, so that we will know what to do. (82–83)

Digital reading operates similarly to this. We have a default gestalt for bound–book reading that has emerged out of ontogenetic experience in a print–led reading environment. We are initially forced to apply that paradigm to reading on digital devices, but electronic reading is capable of interactions, such as hyperlinking, which don't fit in with our bound–book experience, and we must suddenly use a history of interacting with computing and televisual media in order to modify our reading practices. The READING gestalt, in Lakoff and Johnson's terms, is being modified by its interactions with the COMPUTING gestalt; we have to apply this framework in order to understand how we should interact with digital reading spaces.

Digitisation, like any disruptive agent, forces us, and at unexpected moments, to confront the unfamiliar constituent parts of the composite forms, the gestalts, we receive from our milieu. When a digital book 'doesn't feel right' we are reminded of how a bound–book's form functions. When an electronic text is reproduced and pirated and sent across the world in a second we are reminded of print's legal history, its fixedness in space, its immutability, its scarcity. When we read materials which would otherwise have been unavailable, when we see a first time author able to publicise their work to an ideal audience in 50 countries, when we can link to a word or reference that we'd never normally have made the effort to, then things start to seem different. Even if a digital document appears as 'closed' as a printed book we must, then, come to it

subconsciously in a different frame of mind; our attitude to the text is often subtly changed, sometimes radically altered. In the blue script of the hyperlink we can see the potential to discuss what the word 'text' even means, to discuss copyright law's inability to recognise the power of influence, and its related inability to adjust to these new 'disembodied' forms. We might also see how our *own* boundaries blur as much as the text's, as our minds extend, and our society encroaches; the digital text might function as an analogue to ourselves.

Still, this sublimation of the hyperlink, may well seem, to many, a fractional alteration. And when we ask what changes when we attempt to change *nothing*, when the translation is as close to literal as we can make, when for instance, we look at pristine scanned pages of Borges' work and compare them to the bound–book version, the *exact* same script in a different medium, then we can, surely, only talk about minute effects upon the reader. But I believe, as with the ape's locomotion, that each element, each effect, each interaction is cumulative, and by repeatedly performing acts which question our assumptions about how a work should be received, and by deploying, as linguists and theorists, a more media–specific approach to what makes 'text' different from 'script', we might see an incredibly productive shift, allowing us to return to classic, corporeal works with fresh eyes, and start to more fully appreciate what is truly vital to sustain in our reading practices as we continue to translate works into their digital counterparts.

Conceiving of this versioning as an act of translation, if taken alongside Borges' philosophy of the impossibility of definitiveness, reveals two key aspects of digitisation: that the text must change, even if the script does not, and that change, flux, is the default state of text. This is nothing new, of course: the deconstructive practices prevalent in English Studies from the 1960s onwards have long pointed towards similar conclusions. But digital works demonstrate these effects before our eyes, making such conclusions unavoidable. Works are always in motion because we ourselves are also always processes, our iterative actions changing our interactions and conceptions. When we sit with a text, on a page or a screen, we establish a network which is so complex that we rely on conditioned gestalts to guide us through the basics of the engagement. Part of the resistance to digital, then, stems from our grappling to establish such gestalts for 'incorporeal' reading spaces. But so armed with this knowledge we can see that acceptance and enrichment might only take time.

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