Humanum ex machina

Translation in the post-global, posthuman world

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Translation sits at the epicentre of the biotech era's exponential growth. The terms of reference of this discipline are becoming increasingly unstable as humans interface with machines, become melded with them, and ultimately become a networked entity alongside other networked entities. In this brave new world, the posthuman offers a critical perspective that allows us to liberate our thinking in new ways and points towards the possibility of a translation theory that actively engages with other disciplines as a response to disciplinary hegemony. This article looks at how technology has changed and is changing translation. It then explores the implications of transhumanism and the possibilities for a posthuman translation theory. Ultimately, the survival of translation studies will be contingent on the survival of translation itself and its ability to question its own subjective, posthuman self.

Keywords: translation, transhumanism, posthumanism, biopolitics

1. Introduction

There is a scene in Alex Garland's film *Ex Machina* (2015) where it becomes apparent that Kyoko, the beautiful Japanese personal assistant of technology Wunderkind Nathan Bateman, is a perfect robotic replica of a human, but with one significant flaw: she lacks the power of speech. This scene mirrors the core research problem of artificial intelligence (AI) over the past fifty years, because human language stands as the last, near-unattainable bastion that once cracked can open the floodgates to unimaginable consequences. In the film, these consequences come to the fore when it transpires that Kyoko is nothing more than an early prototype to the much more sophisticated Ava, whose advanced communication skills begin to problematize notions of humanity, consciousness and sentience. Like many other treatments of possible worlds where technological advance becomes linked with

a dystopian end of humanity, Garland's future is one where advancements in language processing pose a direct threat to human life. Ava's ability to pass the Turing test gives way to more familiar plot lines that see her attacking the creators who made her while en route to a new sense of sentient freedom.

Questions of artificial intelligence and the ways in which it might affect power relations in the future may seem irrelevant and of no consequence to a field such as translation studies, which has artfully traversed the shifting theoretical sands of linguistics, postcolonialism and postmodernism among others in recent years. While much research has taken place in corpus linguistics, for example, with major projects focusing on the process and mechanics of machine translation (Avramidis 2014; Chan 2014; Costa-Jussa and Fonollosa 2015; Lopez and Post 2013), its principal concerns have tended to be founded on finding an appropriate (and automated) means to execute translations that *feel* human (be they, for example, rule-based or statistically driven) rather than analysing the critical implications for translators and translation as a whole in this new, emerging world of automated interlingual delivery. On the one hand, machine translation software that might produce translations at a human-proficient level offers up the potential for a liberalising of translation, freeing the world of the barriers presented by the much-invoked metaphor of the Tower of Babel, in a democratic act that could serve to challenge traditional hegemonic power structures about not only who translates but also what it is that gets translated in the first place. Making the source of such software open to all presents significant problems for the control of knowledge on the part of states, since populations would be freed from any state-controlled filtering of translations leaving citizens at liberty to invoke their own translations as and when required. Alternatively, it presents some ontological and epistemological problems in its production whereby fixed notions of equivalencies between languages may become inscribed as objective, unchallengeable facts. The dynamic (and in this instance human) nature of language, which is in a constant process of renewal and adaptation, evolving both in relation to other languages and in response to new contexts as they arise, may thus stultify under the canopy of algorithmic linkages that ultimately begin to shape human thought itself. The disappearance of human literary translation, for example, is one possible outcome that many would find distasteful and fundamentally problematic. With the onward march of technology to puncture what remains of the Cartesian coupling of mind and body, the prospect of a transhuman or posthuman world posits opportunities for new forms of power to emerge, including and moving beyond the contemporary discourses of biopower and biopolitics. The ways in which translation theory constructively engages with these discourses will help shape the ways in which we think about and question our understanding of its processes as well as how we will come to define 'translation' itself in the future. In *Ex Machina,* Nathan warns his

captive AI-tester Caleb Smith of the coming singularity as a result of which future AIs will look on humans as nothing more than "an upright ape, living in dust, with crude language and tools, all set for extinction." His creation Ava, meanwhile, has the immense landscape of the Internet underpinning her operating system alongside language skills that are far beyond the capabilities of the human who is engaged to Turing-test her. It is into this possible world that translation theory must launch itself if it is to provide a means for making sense of the dynamic and exponential growth of technologies and their impact on languages, cultures and what remains thereafter of the subjective interlingual self.

2.   The translation factory

In the post-industrial early twenty-first century, the word 'translation' has subsumed a range of interrelated but different meanings. On the one hand, it describes a process – an act of transforming one language to another – which, though fraught with problems (grammatical, contextual, lexical, etc.), evinces by its very existence the open possibility of its being. 'Translation' also refers to the product that is generated out of its processes so that by engaging in translation *processes* you inevitably manufacture translation *product*. A third meaning refers to its referencing of labour – translation *as* profession – something that in addition to doing and making you also work 'in' and that is authenticated in the marketplace by various forms of certification that quantify and guarantee a level of proficiency. Here translation *work* might involve written translation or alternatively live, voiced interpreting from one language to another. Lastly, translation, in much more broader terms, describes a global industry which is currently worth around $37 billion a year[1] and that includes all of the activity previously referred to that can be commoditised, marketed and sold. Translation has both fed and been fuelled by globalisation while at the same time it has re-orchestrated its mercantile terms of reference, making it a global factory whereby its products, like financial stocks and shares, are traded on virtual networks.

While word processing, digital recording, subtitling, and speech recognition software have all made their impact on the task of the professional translator, the establishment of digital platforms for individual translators to source and compete for work has transformed the way in which translation labour operates. Machine translation is gradually being introduced into more and more routine tasks for

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1. The figures vary from source to source but the $37 billion figure can be considered something of a conservative estimate. See www.economist.com/news/business/21642187-technology-may-not-replace-human-translators-it-will-help-them-work-better-say-what.

translators in all fields, where active human engagement with texts increasingly only occurs at the post-editing phase. This in turn is not only affecting how translations are formed but also the form of translations themselves. As Anthony Pym (2013, 491–492) suggests, we are reaching a time that might move us towards redefining not only what a *translator* is but also what the word *translation* might actually refer to. Others have gone further and have viewed the growth of machine translation as an early indicator of the eventual withering away of the translation profession itself (Cronin 2003, 115; Lehman-Wilzig 2000, 484).[2] What machine translation currently lacks in accuracy and nuance is easily offset by its capacity to produce multiple translations of large documents instantaneously. As Lehman-Wilzig noted in his discussion of "synchronous, automated translated systems" (SATS) some sixteen years ago:

> The best professionals today are capable of excellent translation in three to five languages; because of their virtually unlimited memory and networking, SATS will be able to translate an almost unlimited number of languages at any one time. This is a significant quantitative advantage to offset its qualitative disadvantage.
>
> (Lehman-Wilzig 2000, 480)

While the dissolution of the translation industry may still be some way off, a thorough knowledge of computer-assisted translation tools (otherwise known as CATs) has become a standard requirement for new translators entering the profession where speed is valued as much as accuracy. A major advantage of a computer-assisted translation tool is that it can learn from its translator by building a mutual translation memory (TM), growing its database exponentially and making enormous efficiencies of time. The convergence of machine translation software with a growing database of translation memories is laying the basis for a major paradigm shift in how translations are formed and will have a lasting impact on both the translation process and the translation industry, leading to its effective end. Notably, the role of the literary translator might eventually come within the domain of a software application that has adopted the translation memories of a particular individual. Even within our present knowledge and experience of technology, it is not difficult to imagine software that can assimilate and adopt the preferred lexical set of an individual and their adopted usage in more than one language. By mapping these across into a translation memory, the software might then go on to produce translations akin to those a translator might have written as well as affording the possibility of creating translations by a particular translator post-mortem.

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2. While pessimistic views of the future of translation are discussed by Cronin, he ultimately argues that the use of technology will allow translators to focus on the creative aspects of translation (Cronin 2003, 118).

3. The factory is shut down

Michael Cronin has explored some of these ideas in his book *Translation and Globalization*(2003) and more recently in *Translation in the Digital Age* (2013). While Cronin remains a little sceptical of the view that technology will sound the death knell to the translation industry and profession, he does concede that it will open up new and more urgent questions for translation theory. For Cronin, even if the predictions of Lehman-Wilzig were to come true, translation scholars would still be faced with the very real and urgent questions of establishing who in the global, informational society is translating for whom and for what reason (Cronin 2003, 118). These questions of agency surface again in his more recent work where the digital age is conceived of as the "interaction age" (Cronin 2013, 54) in a process whereby translation might become the ideal vehicle for us to better grasp the broader impact of the digital on society. This presents a fundamental shift that moves away from theoretical concerns of what translation is and what translation *does*, and of how machine translation works and what statistical approach might favour the best results, to questions that seek to determine and understand the power relations that lay behind the commissioning of translational acts. It also breaches the gulf between technical translation and literary translation in ways that might well send the sensitivities of literary translators into a state of apoplexy. Of course, it is impossible to know for certain what power relations might underscore the future transactions between languages when translation becomes an instantaneous act. One possible consequence, for example, could be the ultimate merging of all languages into a hybridised form that only contains elements from the most dominant forms. The novelist David Mitchell has invoked such a possible world in his multi-layered novel *Cloud Atlas* (2004) where language has become a post-apocalyptic pigeon English called 'yibberin.' At such a moment, the need for translation disappears and the mythical tale of the Tower of Babel finds its inverse mirror-image in the loss of the complexity and beauty of multiple tongues.

4. The city and the translation

The theoretical discourse that has arisen out of the study of the role of technology in urban spaces offers up some possibly useful routes for reconceptualising how we might think about the future of translation as we move from an era of globalisation to an era of biotechnology.[3] Much of this discourse carries a deep legacy from the

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3. Canadian translation scholar Sherry Simon has written two major works which focus on the intersections between the city and translation. *Translating Montreal* (2006) explores the cultural

work of Michel Foucault and his ground-breaking study of eighteenth and nineteenth century institutions such as the school, the hospital, the mental asylum and most notably of all, the prison. Foucault's conception of the 'disciplinary societies' examines how space was enclosed and then utilised to generate new productive forces whereby society became organised through a process of individuals passing from one disciplinary society to the next (such as the route from school to factory) in a seamless process that served to maintain the status quo. However, Foucault also saw that the disciplinary societies were not necessarily permanent entities and were and continue to be subject to crises as they give way to the societies of control (Deleuze 1992, 1–2). These ideas have been highly influential and informed a great deal of critical thought towards the end of the twentieth century, most notably in the work of Deleuze and Guattari (1984, 1988). Félix Guattari (1995), for example, has written about the hegemonic forces that can be enacted on an individual when the 'societies of control' have our every moment digitised, tracked and sanctioned (or not). Indeed, the whole question of surveillance has been responsible for a wide range of critical writing emerging into and beyond this millennium.

Influenced by Foucault, among others, Catalan sociologist Manuel Castells has been an important figure in thinking about the ways in which city space has evolved in response to the rise of new technologies (Castells 1989, 2004, 2015). Within his body of work, Castells refers to the term 'space of flows' as a conceptual way of understanding the speed and evolution of translocal and transnational movements (Graham 2004, 82). The relations between the space of flows (the space inhabited by technological activity) and the space of places (the geographical space of the cities in which many of us live) have been theorised in order to better understand the development of social identities and the ever-evolving ways in which city spaces are becoming reconfigured. Castell's theory of "urbanism in the information age" (Castells 2004, 83) documents the tensions between the spaces of flows and the spaces of places, and he is deeply concerned by the fundamental and ever-accelerating changes to the urban landscape that have taken place over the past twenty years or so. The picture that emerges is one of unbridled urbanisation where expansive cities will be occupied by up to three quarters of the world's total population. Within the vast economic and social changes this has caused (including immense demographic movements), Castells seeks to reconceive a theorisation of the urban sphere which centres on what has become quite a familiar topic in social geography – the relationship between the local and the global. Castells

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history of that city through the interface between its architecture and geography, which becomes a methodology that she adopts more broadly in *Cities in Translation* (2013), where the connections between languages, memory and landscape are extended to include Calcutta, Trieste and Barcelona.

highlights an inherent tension between these two polarised entities, a tension that is evinced by the many dominant processes that are organised on a global scale (such as the economy and the media) while cultural identity remains locked into the local. Thus, a state of inherent tension comes to the fore where "cities are structured and destructured simultaneously by the competing logics of the space of flows and the space of places" (Castells 2004, 85).

More recently, Castells has explored the rise of popular protest movements around the world taking on a whole range of contemporary events such as European economic austerity, the so-called Arab Spring, and the growth of anti-capitalist movements around the globe. *Networks of Outrage and Hope* (Castells 2015) explores how social media have provided an operating system for the protest movements that arose after 2011 in Tunisia, Iceland, the United States, Egypt and Spain. The emotions of hope and outrage emerge here as potent affective states facilitated by an Internet age which has provided the simultaneous development of networked revolutions. Castells sees an outward movement evolving from the cyber or virtual spaces via social networking sites such as Facebook and Twitter to geographical physical spaces where protest literally spills out onto the street. The mobilisation power of the Internet is a critical driver of popular protest; an organisation such as the Occupy movement, for instance, "was born on the Internet, diffused by the Internet and maintained its presence on the Internet" (Castells 2015, 168).

Castells' work, which bears some similarities with other techno-determinists such as Clay Shirky (Shirky 2008) and Andrew Sullivan (Morozov 2009), provides some insights on how we might conceive of and theorise translation in the Internet age in ways that may point towards a potentially liberalising trend.

5. Spaces of flows and translation

Castells' notion of the tension between the spaces of flows and the spaces of places speaks directly to the ways in which the translation industry has evolved in recent years. Castells is highly sceptical of a view of the future where nobody needs to travel in to work anymore and points to the impact of the accelerated spaces of flows on the spaces of places by the constant need of large conurbations to bolster and improve upon their transport infrastructures in order to keep ahead of the game. The arrival of the Crossrail project in London, for example, would fit this theorisation well: those living at the far Eastern and Southern reaches of the city's urban sprawl are going to be given fast access to move into the city centre and out to the West (and the international hub that is Heathrow airport). With an increasingly urbanised population, Castells sees the need to travel comparatively long distances as quickly as possible as something that will become even more important.

However, the ways in which the translation industry has developed during the twenty-first century and the specific flows of technology that are connected to its now routine operations would seem to offer a prescient counter to Castells' idea that location and destination are coetaneous sites of electronic processing. The Internet age has allowed for the establishment of virtual networks, with translation companies undertaking their business online utilizing platforms that see translators working from anywhere in the world. A Russian translator living in Spain, for example, may receive a job from Argentina – a place he or she has never visited – and can be paid for the work through an online payment system such as PayPal in his or her own currency. There is no need for face-to-face contact, no need for travel, and the impact from the space of flows to the space of places is at zero. In fact, in a world where outsourcing has become a principal means for business to demonstrate its commitment to financial probity, the translation industry may be setting the trend for how a whole range of production tasks will come to be organised.[4] Castells does not address the possible impact of future technologies in his empirically rich studies or how these may move beyond any apparent tensions between spaces of flows and spaces of places. Machine translation, for instance, may become increasingly sophisticated and move from providing a pre-editing workflow phase to something that can generate fully fledged Turing-testable, nuanced, intuitive and affective translations of its own, to the point that any work in any literature may potentially be accessible to anyone from any language. At this juncture, the physical need for humans to move anywhere to achieve these ends will become completely redundant. The implications of translation's engagement with technology – the ways in which its space of flows relates to the space of places – are not necessarily diminished, however. In fact, the possibility of being able to access more and more languages and cultures instantaneously might have a range of positive effects that offer a different and more optimistic perspective from the popular dystopian visions provided by contemporary film and fiction.

The paradox of technology is also of central concern to media theorist Arthur Kroker, who has characterised it as being in an organic state of acceleration, drift and (eventual) crash as we now live at the cusp of what he refers to as "the tip of the posthuman" (Kroker 2014, 2). Kroker's principal aim is to articulate a way through the technological maze that has witnessed an exponential growth, a phenomenon referred to by Ray Kurzweil (2005, 105) as "the law of accelerating returns." As the innovation of the digital medium attains the giddy heights of global domination, a paradox surfaces as it facilitates and enables popular unrest to sweep the world in equal measure.

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4. This also relates to the rise of the so-called 'gig economy' whereby workers are increasingly engaged in short-term tasks through a range of online portals including apps. See, for example, Friedman (2014).

Like Castells, Kroker strives to account for the apparent tension between innovation and protest in ways that engage more thoroughly with the critical discourses of the late twentieth and early twenty-first centuries, with notable influences from the work of Foucault. "Technopoiesis" – a kind of techno variant of autopoiesis[5] – surfaces as a key critical concept. It refers to the ways in which technology is enmeshed in its own feedback loop with science, producing exponential growth, broadly defined by cultures as 'progress' despite many technological developments being far from progressive. Again, the question of who owns the technology, where the power structures are located and how these might be challenged continue to pose urgent questions for a critical discourse that can be traced back to Marx and beyond. Andrew Feenberg, for example, has argued for a revision of Marxist approaches to technology that looks more positively towards the potentiality of technological innovation (Feenberg 2002, 23–35).

6. Global voices and the revolution

Much of the popular literature around technology and translation focuses on the relentless pace of change, which appears to be fraught with danger and threat (Williams 2014; Fernandez 2015; Yahaya 2008). The story goes something like: in the future, translators will disappear as they will be too slow at the job compared to their machine equivalents; even literary translation will be punched out of a sausage machine where all human nuance and emotion will disappear. Moreover, the control of translation and ultimately all human language will be owned by the same multinationals that run the networks upon which human life will become dependent. With the rise of technology giants such as Google, Amazon and Apple, there is some evidence to support the concerns of this rather depressing view of the future (Harrison 2015). However, the digital paradox (that attempts to reconcile physical benefits against potential human costs) suggests that the picture may be somewhat different. Thus, pro-technology commentators such as Castells have been keen to emphasise the potential for technology by highlighting its liberalising capabilities. In this view, technology provides the platform for and even initiates large-scale uprisings and protest movements that directly offer a challenge to hegemonic control. Technology here does not sit exclusively within the domain of the multinational and can be manipulated and utilised as a way of countering some of the more unpalatable aspects of global capitalism. Looking at translation as a paradigmatic field that is open to critical analysis, it is possible to discern a

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5. For a recent exploration of "autopoeisis" and in particular the influence of the sociologist Niklas Luhmann's ideas on Translation Studies, see Tyulenev (2012, 43–44).

more nuanced view of its responses to technology beyond its role within the global marketplace. Translation continues to be integral to the operational functionality of global capital (one has only to consider how endemic translation has remained to the day-to-day, routine operations of the European Union to see how translation and capitalism coincide, for example). However, it has also continued to adapt to new contexts in ways that can challenge the power of governments and the hegemonic forces to which populations around the world remain subjected.

7.   Translation and the global voice

New technologies have transformed both the mechanics of labour (the work processes undertaken in order to carry out a particular function) and how it is organised (which has become inherently and inextricably linked to the global marketplace). At the same time, they have transformed the ways in which we spend our leisure time. There is increasing evidence, for example, that traditional television viewing, particularly among the young, is decreasing. What was once an analogue activity is now giving way to a range of more interactive pursuits, as online and television viewing are becoming part of a range of online extension activities (Boneva et al. 2006; Strangelove 2015; Tryon 2015). The spawning of social networks, some (Facebook, Twitter, email) more successful than others (MySpace, Second Life), has seen the territorialisation of virtual space, since it is privately owned companies who are providing platforms for social interactions at a complexity and rate that would have been unthinkable barely a decade ago. In this sense, Castells' notion of "network power" – there exist many networks of power which, though linked, do not merge (Castells 2015, 8) – is useful in that it provides a means of conceptualising structures of new forms of power that nods towards Deleuze and Guattari's idea of the rhizome and the rhizomatic power structures of postwar modernity (Deleuze and Guattari 1998, 13).

While the so-called technological age in which we now live has transformed the translation industry and the translation profession, the informal structures of social networking have also provided a platform upon which translators around the world have been able to network, exchange practices, and promote their craft to a global audience. Global voices (globalvoices.org), for instance, is an informal international network of bloggers, journalists and translators that grew out of an initiative of Harvard Law School in 2004. The network is founded on the principles of free speech, an advocacy for international human rights and an opposition to censorship, and its members write and translate blog entries from around the world. The network has garnered a host of awards for its pioneering work in developing a platform for the dissemination of citizens' media. Tackling issues as

diverse as female genital mutilation in Somalia, Chinese censorship of the Internet, and Russian political corruption, Global Voices provides a central repository for liberal-leaning citizens from around the world to come together and explore the current social and political issues of their countries on a virtual platform that is predicated on the use of translation as its central vehicle for exchange.

In Castells' terms, Global Voices might represent just one other form of network power or networked social movement striving to achieve change through the manipulation of new technologies and fostered by the ever-increasing rise of "mass self-communication" (Castells 2015, 6). The liberal and liberalising mission of Global Voices rests on the inclusivity and acceptance of other cultures through the voluntary and non-commoditised participation of translators. As such, it holds the possibility to challenge the traditional power structures of the multinationals while at the same time manipulating the very same technologies that legitimise them. A future world without Global Voices would be an impoverished one but, given the forward march of translation's integration into technology, what would be the point of an automated Global Voices? It would provide instantaneous and possibly more accurate translations in many more languages. But, given that the fabric of the network *is* the network itself, without its active participants the reason for Global Voices' existence would dissipate and finally disappear altogether. There is no point in having the possibility of multiple translations in a blink of an eye if there is no-one left who is interested in reading them. It seems as if Global Voices might posit a significant moment in time for translation as it sits on the cusp of moving from the Internet age to a new age altogether, the dawning of Aetas Ex Machina, a new age of the machine.

8.   Transhumanism

Transhumanism is a movement that took root in the 1980s and 1990s and, in what is a highly problematical field, can be seen as forming part of the broader movement of posthumanism – a collective term which encompasses a range of critical theories that share a joint focus on articulating a future world beyond the extant material characteristics that constitute the current state of being human. Posthumanist feminist philosophers such as Rosi Braidotti and Donna Haraway have added to and enriched postmodern critical theory. Indeed, it is worth noting that the discourse of posthumanism is closely connected and led by feminist scholars in a neoliberal world where feminism has too often become discounted, marginalised and denigrated as an outmoded irrelevancy (McRobbie 2009, 2016; Toffoletti 2007). In general terms, posthumanism is centred on theorising a future that moves beyond the anthropocentrism that continues to threaten the ecological

sustainability of the planet, and has also material preoccupations related to the breaching of the human body with technology.

Transhumanism and its techno-progressive variants, such as extropianism, stand in stark contrast to the dystopian narratives of popular culture that have sought to fictionalise the potential of scientific developments in ways that typically frame it around an ever-evolving threat to social democracy. Extropianism views technology and progress as being in symbiosis, with its primary concern centred on the future ability of technology to provide enhancements and longevity to the human body. Thus, transhumanism has tended to focus on enhancements where the machine and the body come together, the former supporting and enhancing the life of the latter. These enhancements occur through and with technology and provide the impetus for new ethical debates in biotechnology, since what are currently offered as replacements to missing or faulty organs and limbs (such as transplants, implants, and prosthetics) might become available as substitutions for ageing but otherwise healthy bodies. For example, the cochlear implant – a device that is surgically placed into the ear canal to stimulate the cochlear nerve, was developed in the 1980s as a way of making sound available to the profoundly deaf. Their use has been somewhat controversial among the deaf community, because a significant faction views its adoption as an act of pathologizing their human condition as an illness or sickness in need of a cure. In this sense, deafness is not a disability but simply a different and equally important way of understanding the world. This issue becomes compounded with the prospect of offering an enhanced form of hearing to an already hearing human – something that remains an ethical leap that many would find objectionable. The move from reducing the effects of a perceived disability to providing an extra super-ability is a highly contentious area and provokes questions about the increasing use of surgical enhancements in general. Recent innovations in technology such as the ability of 3D printers to print organs (Schubert, van Langeveld, and Donoso 2014) and the increasing blurring between disability and enhancement (Camporesi 2008) would seem to point towards a future where concepts of both humanity and mortality become sites of instability and ambiguity. These issues all call for a reappraisal of Foucauldian biopolitics, since the provision of organs and enhancements are distributed and legislated by sovereign powers and can provide the means for new forms of biopolitical production and more generally point towards the formulation of an affirmative biopolitics (see Hardt and Negri 2009).

Translation in a transhuman age inevitably moves the machine into the body, the software into the soft tissue, the app into the ear. The IBM mainframe that disintegrated into a smartphone will literally become embodied, as translation becomes an invisible, automated process. The multiplicity of languages that define us through and by our different cultures will no longer serve as an impediment to

communication and mutual understanding. Language will be reduced to code in the same way as the human body can be reduced to its own genetic code in ways that will mean that 'translation' itself will need redefining as it ceases to operate in the market place as we currently understand it, moving away from questions of linguistic equivalency, authorship and power to notions of velocity, accuracy and interface. Translators will no longer be the analogue gatekeepers of binary pairings of language sets and, like translation *as* process and translation *as* product, they will probably disappear altogether into a post-global, posthuman realm. While such ideas may seem to be the raw material of science fiction, the exponential growth of technology in what American political scientist Frank Fukuyama calls the "biotech century" means that it is no longer a matter of if but simply when.

9. Translation, posthumanism and power

Posthumanism calls our attention away from anthropocentrism to a world that has become post-global, where time and space are as fluid as identity. Rosi Braidotti's work in this area calls for our renewed attention on the ontological and epistemological implications for the posthuman subject. Like fellow Italian philosopher Giorgio Agamben (1998) and his explorations of biopower, Braidotti's project is contingent on a distinction between zoë[6] and what we currently understand as 'life.' The former liberates its subjects from the confines of anthropomorphism and anthropocentrism that have remained united under capitalism. Braidotti poses the vital question of what it is that constitutes being human, how (human) rights are accrued and under what purposes, and is set upon relinquishing the philosophical continuum between nature and culture – a binary construction that she finds no longer relevant to the oncoming world of posthuman subjectivities (Braidotti 2013, 3). Her project is determined to reinvigorate the marginalised Humanities and in doing so she proposes a set of new methodologies of posthuman critical thought – namely, cartographic accuracy, trans-disciplinarity, critique combined with creative configurations, non-linearity, the power of memory and the imagination, and de-familiarisation (163). Just as the human subject becomes ripe for redefinition within the posthuman frame, translation – that most human of processes, so fundamental to intercultural communication – is also placed in jeopardy. Contemporaneous definitions become redundant to a process that, reduced

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6. The term 'zoë' originates from Aristotle and more recently Hannah Arendt in distinguishing between 'life' and what might correspond to a 'good life.' 'Zoë' refers to biological existence which is in marked contrast to the political life ('bios') of speech and action. These ideas were later developed by Giorgio Agamben (1998) in his conception of 'bare life.'

to data sets and manipulated by software, will ultimately be embodied and networked. Seen through Braidotti's posthuman methodological touchstone of cartographic accuracy, translation is operating globally, and any limitations of physical space (which have already largely fallen away) will be disrupted in the same way that time will ultimately become immaterial to the materiality of translations, created at the moment of request, simultaneously, in hundreds of different languages if so required. To understand questions of power within the realm of globalised translation is to engender a cartography that needs to be non-linear in order to account for the posthuman era's paradoxes (165). Thus Braidotti refers to power as both a restrictive force as well as an affirmative practice: technology can be used to create narrow, unimaginative translations that move towards retrogressive practices of standard equivalencies, and it can create virtual networks of translators who operate in a global sphere of mutual cooperation. As we have seen, translation is already operating within this posthuman paradox, since the threat to creativity and individual control is matched by popular uprisings and cooperative virtual networks such as Global Voices.

Any emergent academic discipline needs to raise its status within the broader critical arena and this inevitably involves the construction of borders and the ascribing of dualisms – the things it is and the things it is not. Translation studies is no exception; in establishing itself as a credible field, it also set out to both justify and territorialise its position. It is possible, therefore, to draw a line from the 1958 meeting of Slavists in Moscow (Pym and Ayvazyan 2015, 332)[7] to James Holmes's 1972 paper on translation studies (Holmes 1988) to Venuti's call for a new ethics of translation (Venuti 1998) in a development trajectory that reifies and circumscribes translation studies as a discipline separate from, and in contrast to, other related fields such as linguistics and comparative literature. The relationship between translation studies and adaptation studies is a telling example of how fields of study seek to promulgate their disciplinary separateness even when they appear to be closely aligned.[8] Posthumanism threatens the singularity of disciplinarity and makes trans-disciplinarity one of its defining features. In a networked world where space and time are elastic, translation theory will need to actively engage and interface with other disciplines rather than spend its resources on building

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7. Pym and Ayvazyan (2015) offer a compelling case for the ways in which translation studies has not operated as a unified discipline and suffered in particular from the cordoning off of Russian translation theories by the Iron Curtain where later innovations and discoveries were actually already in existence.

8. Lawrence Venuti's engagement with adaptation studies, for example, saw an approach to bridge disciplines whereby translation ultimately becomes a mode through which adaptation theory is critiqued (Venuti 2007).

high walls to keep those inside locked into a disciplinary vortex. Braidotti's call for a (post-Marxist, post-structuralist) critique that involves creative configurations invokes the need to free the formation of new conceptual ideas from the limitations of normative-oriented critical thought itself. It also needs to engage with the oscillating or "zig zagging" (Braidotti 2013, 164) of what happens between the binaries, the rhizomatic enterprise of engaging in multiplicities. Memory, too, follows a similar path as in the posthuman world it is no longer bounded to the simple chronologies of time but rather presents a radical, multi-directional reinvention of the self within the virtual. The functioning of translation in the posthuman, then, needs to account for these multiplicities as it builds new memories that link the machine's TM with the human, and one inevitably builds on and zigzags between the other, and creativity arises out of the friction between the two. Lastly, Braidotti's methodology for the posthuman scientific method refers to a process of defamiliarisation where a sense of the human self is relinquished altogether, and the human subject is no longer the epicentre or central concern governing all thought. In this way, a posthuman translation theory might need to account for the ethics and rights of the machine translator as much as the human translator, but it would also need to broaden out of its scope to include the vastly under-researched area of interspecies translation. In the post-global, posthuman world where the machine and the human merge, becoming transhuman and ultimately indistinguishable from each other, what insights will such a theory be able to offer?

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