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Special Issue: (Inter-)epistemic
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TRANSLATION MATTERS

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Special Issue: (Inter-)epistemic Translation

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EDITORS' INTRODUCTION (INTER-)EPISTEMIC TRANSLATION: A NEW PARADIGM?

Translation, in its conventional interlingual form, has been present in the transmission and development of knowledge since the earliest times. From the recovery of the lost Hellenistic science in the libraries of Andalusia in the twelfth and thirteenth centuries to the circulation of academic texts in modernity, manuscripts have transited across time and space, crossing intercultural and interlingual boundaries, thanks to the tireless efforts of teams of translators, working under different kinds of constraints and funded by various kinds of patrons.

This special issue, however, is not so much interested in the interlingual translation of knowledge,¹ as in the transmission of information between different epistemic systems. The idea that there may exist distinct knowledge regimes with their own internal coherence has been with us at least since C.P Snow, who, in 1959, lamented the subaltern status of Science in an academic world still dominated by humanistic learning. However, the notion of the episteme [*épistémè*] as a configuration of unspoken assumptions underpinning what is understood to be knowledge at a particular moment in time can be traced to Foucault, who, in *The Order of Things* claimed:

In any given culture and at any given moment, there is always only one *episteme* that defines the conditions of possibility of all knowledge, whether expressed in a theory or silently invested in a practice. (Foucault, 2002, p. 183)

Today, in most Western societies, it is the episteme of Science that determines what is legitimately considered as knowledge. Science produces 'facts', defined in most English dictionaries as that which actually exists or is proved to be true;² which means that all other forms of knowing are tacitly regarded as subjective and therefore not 'true'.³ As for non-western knowledges, such as the traditional philosophies of the East, or the indigenous knowledges of the Global South, these are stripped of cognitive authority

¹ This has been amply dealt with elsewhere. See, for example, Bennett (2023), Montgomery (2000) and Duris (2008, reviewed here by Jennifer Dobson).

² Sokal & Bricmont (1998, p. 102) add: "For us, as for most people, a 'fact' is a situation in the outside world that exists irrespective of the knowledge we have (or don't have) of it – in particular, irrespective of any consensus or interpretation". However, this appeal to objectivity is belied by the etymology of the word, which is derived from *factum* (the past participle of the Latin verb *facere*, to do or to make) and therefore technically means 'things made or done'.

³ As Richard Rorty puts it: "In our culture, the notions of 'science', 'rationality', 'objectivity' and 'truth' are bound up with one another. Science is thought of as offering 'hard', 'objective', truth: truth as correspondence of reality, the only sort of truth worthy of the name. Humanists – for example, theologians, philosophers, historians and literary critics – have to worry about whether they are being 'scientific', whether they are entitled to think of their conclusions, no matter how carefully argued, as worthy of the term 'true'" (Rorty, 1991, p. 35).

through processes of epistemicide,⁴ and reduced to the status of 'myth', 'tradition' or 'belief'.

Inter-epistemic translation is a way of bridging the gulf between these different epistemes, with a view to putting them into dialogue. The aim is ultimately to combat the epistemological monoculture (Bennett, 2015) that is proving so devastating to our societies and especially to our planet,⁵ and to work towards an 'ecology of knowledges', on the understanding that "different types of knowledge are incomplete in different ways and that raising the consciousness of such reciprocal incompleteness /.../ will be a precondition for achieving cognitive justice" (Santos, 2016, p. 213).⁶

It also goes some way towards fulfilling the prophecy made by Arduini and Nergaard in 2011, and reiterated in various forms by Gentzler (2017), Blumczynski (2017), Robinson (2017), Marais (2018, 2022), and Bassnett and Johnston (2019), that translation is now poised to expand its remit far beyond its traditional domain to become a major interpretive and operative tool at the centre of a whole new transdisciplinary research paradigm.

The term 'interepistemic translation' was coined by Douglas Robinson in his 2017 book *Translativity* as a potential fourth kind of translation to add to Roman Jakobson's tripartite division.⁷ He describes it as a process of narrative reframing "similar to ... *translatio studii*, the translation of learning, also known as the transfer or transmission of knowledge – which is never a 'cloning' of knowledge, of course, but always involves what I'm calling translationality: adaptation, transformation" (2017, p. 200). In the pages that follow, he envisages a whole series of different relations that could be studied under this rubric, ranging from the kinds of operations contemplated in translational medicine and the medical humanities, through the writing of popular science and representation of scientific issues in literary fiction to the study of how knowledges transform over time as epistemological paradigms wax and wane.

The EPISTRAN project,⁸ launched in 2023 at the Centre for English, Translation and Anglo-Portuguese Studies (CETAPS) at Nova University of Lisbon, has sought to develop the notion of (inter-)epistemic translation from Robinson's initial idea by using the tools, concepts and resources from Translation Studies to study the way that knowledge is, has been or could be transferred between different epistemes. At present, the project is divided into three strands: one looks at the relationship between Science and Humanistic learning, with a focus on science communication and popularization, and literary accounts of scientific knowledge (Strand A); a second is concerned with non-western knowledges,

⁴ See Price (2023, reviewed here by Paola Mancosu) on the various kinds of epistemicide at work in indigenous contexts.

⁵ See Cronin (2017) for an overview of the ecological problems deriving from the hegemony of this episteme and suggestions for how translation may be deployed to contribute to their solution.

⁶ See also Santos (2008, 2018).

⁷ 1) intralingual translation or rewording is an interpretation of verbal signs by other signs of the same language; 2) interlingual translation or translation proper is an interpretation of verbal signs by means of some other language; 3) intersemiotic translation or transmutation is an interpretation of verbal signs by means of signs belonging to non-verbal systems' (Jakobson, 2000, p. 114)

⁸ www.epistran.org. See Bennett (2024) for an overview of the project, its aims and outputs.

both knowledges of the Global South and traditional knowledges of the East (Strand B); while a third is historical, focusing on the repackaging and/or exclusion of premodern knowledges with the advent of modern Science (Strand C). All three of these are represented in this special issue with articles by, respectively, Pedro Navarro and Mohammad Aboomar (Strand A); Africa Vidal, Margherita Zanoletti and Xiaorui Sun (Strand B); and Angelo Cattaneo (Strand C).

Finally, there is another aspect that was not initially contemplated by the project in its first incarnation, but which acquired prominence at the first international conference, held in Lisbon in December 2023. Represented here by the contributions of Piotr Blumczynski and Kobus Marais, this expands the object of study beyond Robinson's concept of interepistemic translation to something much broader, namely the translational processes through which new knowledge is generated from primary experience.

It is this decalage that lies behind the terminological instability that the attentive reader will note across the issue as a whole. The terms *epistemic*, *inter-epistemic* (hyphenated) and *interepistemic* (unhyphenated) are all used to qualify 'translation' at different points, as well as the compromise term (*inter-epistemic*) that we eventually chose for the main title. For now, the difference between them remains intuitive. Perhaps later in the day, when more work has been done on the subject, it will be possible to formally distinguish them one from another.

The special issue opens, appropriately, with a paper by **Douglas Robinson** in which he theorizes the concept of interepistemic translation that served as the inspiration for the EPISTRAN project and this publication. He begins by briefly running through the three types featured in his book *Translationality* (2017) all located at the frontier of medicine and humanities,⁹ before turning his attention to a 1981 article by Itamar Even-Zohar on Transfer Theory. The bulk of his article is given over to a discussion of the eight hypotheses that Even-Zohar presents at the end of his article, which Robinson interrogates as being of great relevance for the interepistemic project. While most of his analysis is very abstract and theoretical, in keeping with the style of the text under discussion, he does illustrate some of the points with concrete examples from food transculturation, suggesting that "creative/adaptive/transformational cooking and plating and serving" and also "traveling

⁹ The first concerns the field that is today known as the *medical humanities* (the interface between specialist knowledge about disease and healing, and human stories of illness and suffering as dealt with in a novel or memoir); the second is the *translational humanities of medicine*, illustrated with a case-study concerning the medical knowledge of Galen and how that got passed down through the ages in various forms until it was eventually transformed into literary history; while the third looks at the *medical humanities of translation*, involving the transformations undergone by medical research on empathy as it feeds into humanistic research, and more specifically the phenomenology of translating.

and entering restaurants and eating” might be viewed as epistemic systems in their own right.

Robinson's initial proposal for interepistemic translation in his conclusion to *Translationality* gives particular attention to the relationship between scientific and humanistic forms of knowledge, as we have seen, and as a result, this aspect is already particularly well developed in the EPISTRAN project. **Pedro Navarro's** article, about the popularization of Darwinism in nineteenth-century Brazil, reflects this. Working at the interface between History of Science, Science Communication and Translation Studies, Navarro begins his article with a theoretical discussion about the concept of science popularization and how this relates to interepistemic translation and translationality more broadly, before moving on to his case study, Charles Darwin's *Origin of Species* (1859). He explains how the ideas contained in this work (which was itself a summary of a much longer tome, known informally as Darwin's 'big book') were first translated into German, where they underwent a series of transformations in the hands of three German scientists, who adapted it to suit their language and epistemological agendas, and then into French, before appearing in Brazil in the popularizations of Augusto César de Miranda Azevedo.

The next article, by **Mohammad Aboomar**, is also concerned with evolutionary biology, but this time in relation to religious worldviews, which he conceptualizes as systems producing knowledge of a different kind to Science and using different means. Focusing particularly on publishers' paratexts, which provide crucial information about the assumptions and motives underpinning the various recontextualizations, he traces the process through which evolutionary biology was transformed into anti-evolutionary rhetoric by creation science and intelligent design movements in the United States, before being translated and adapted by Islamic organizations for use in Muslim contexts.

The following three articles are from the second strand of the EPISTRAN project: *Knowledges of the World*. **Africa Vidal's** article begins with a discussion of the concept of 'epistemicide' as applied primarily to the indigenous knowledges of the Global South and examines some of the proposals that have been made by anthropologists and others to combat this situation through sensitive translation practices. She then turns her attention to contemporary art, exploring its potential to translate indigenous worldviews in multi-sensory ways. After lingering briefly on Jackson Pollock, whose haptic drip paintings are in part inspired by the tactility of Navajo sand paintings, she focuses on Joseph Beuys, presenting his live installations as 'shamanic translations' that use the primitive world as a way of attacking the "closed, static, and dogmatic structures" of contemporary society.

Margherita Zanoletti, for her part, examines an illustrated children's book by Australian aboriginal author Oodgeroo Noonuccal as an exercise in (inter-)epistemic translation and part of a strategy of cultural resistance against epistemicide. The work, *Stradbroke Dreamtime* (1972), which includes episodes from the author's childhood on Minjerribah (North Stradbroke Island), alongside Creation stories and other tales from the people of the land, is analysed in three different ways: as an exercise in autobiographical writing (i.e. translation from embodied experience into literary form); as a transformation

of aboriginal oral knowledge into written literature (diamesic resemioticization); and as an intersemiotic translation of textual material into visual image in a way that evokes the pictorial and performative aspects inherent in Aboriginal storytelling. The work as a whole, she concludes, thus functions as a performative device that encourages interaction, facilitates comprehension, and expands the audience on a global scale, supporting Oodgeroo in her mission to bring the knowledge of her people to the attention of the West.

Xiaorui Sun's article, which follows, explores the overlaps that exist between Deleuzian Affect Theory and the Qi Theory of traditional Chinese medicine, with a particular focus on the concept of hysteria. Beginning with a discussion of two accepted Chinese translations for the term 'hysteria' which "both fail to construct the periperformative interactions between the Eastern and Western epistemic regimes", she proposes instead an interepistemic approach that involves looking for common ground between the two. Rejecting the dominant Western tradition as too fixated on binarisms ("always honoring one pole and banishing the other"), she finds more sympathetic material in a 'counter-hegemonic epistemic regime' that she identifies as running from pre-Socratic philosopher Anaximenes through Spinoza to contemporary thinkers Deleuze, Guattari and Massumi. In particular, the Deleuzian concept of the 'body without organs', with its upturning of the conventional body/soul dualism, strikes her as having much in common with Daoism and the theory of *qi*, bringing potential not only for the translation of knowledge between East and West, but also for translation theory and practice more broadly.

Eastern and Western knowledges come into contact again in **Angelo Cattaneo's** article, which describes the confrontation between cosmologies that took place during the Jesuit missions to Japan and China in the second half of the sixteenth century. The Jesuits' main aim was of course evangelization, but as the Creation *ex nihilo* (a fundamental dogma of Christianity from which all other articles of faith were derived) was embedded in and explained through the Aristotelian-Scholastic cosmology of the homocentric spheres, it became imperative to convince their interlocutors and potential converts of the science behind the dogma. Their attempts at interepistemic translation, involving astronomical diagrams, globes and armillary spheres, as well as logic and mathematical demonstrations, were met with (amongst other things) neo-Confucian counter-arguments based on the notions of *ri* ("principle" or "pattern") and *qi* ("generative energy") as the primordial forces driving the world. The extent to which the Jesuits were successful in their enterprise can perhaps be measured by the fact that, in Japan at least, the Aristotelian-Ptolemaic concepts of the spherical earth and spherical universe gradually took root, though detached from the Christian matrix in which they had been presented, persisting even after the expulsion of the religious orders in 1614.

The last two articles complicate the concept of interepistemic translation that we have been exploring until now by questioning the stability of the epistemes involved in the process. For **Piotr Blumczynski**, knowledge is never static but instead something dynamic and emergent, a constant process of assessing evidence and making sense of it. Thus,

experience (in the particularly English understanding of the term) becomes the basis for a materially grounded epistemology of translationality, now defined as “an experience of connecting – metaphorically, but through material and sensory mediation – with another reality across temporal and spatial distance”. Arguing that translationality can be encountered in all aspects of everyday life, he ends his article with two personal and moving accounts of translationality in music, which stress the psychosomatic and material nature of lived experience.

The final chapter of this special issue, by **Kobus Marais**, is also more concerned with the translational processes involved in primary knowledge creation than transmission between already existing epistemes (hence his preference for the term ‘epistemic’ rather than ‘interepistemic’ translation). The starting point for this very philosophical reflection is the Vredefort Dome, a massive crater in central South Africa whose origins were still being hotly debated until a few years ago. From here, Marais moves on to a theoretical review that dialogues not only with the neuro-social hermeneutics of Douglas Robinson but also with the new materialist perspective as represented by physicist-cum-philosopher Karen Barad. Activating the broad semiotic framework established by C.S. Peirce (who himself used ‘translation’ to explain the relationship between representamen, object and interpretant), and the semiotic realism of John Deely, Marais argues that knowledge creation needs to be constrained by ‘matter-energy’ (what the Scholastics called *ens reale* or ‘mind-independent reality’), not just for practical reasons (to ensure that aeroplanes do not fall from the sky, for example) but also for ethical ones. He ends his piece with a powerful ethical appeal that has much in common with the arguments used by foreignizing translators and anthropologists attempting to explain worldviews of indigenous peoples: the *thing*, he says, is an Other, which needs to be shown respect rather than ‘constructed’ in a solipsistic way. Only by listening to nature and attempting to translate it *on its own terms* do we stand any chance of stalling the ecological crisis that currently assails our planet.

Before we end this Introduction, mention also needs to be made of the four book reviews, which explore published works of great relevance to the project. Jennifer Dobson’s review concerns the French collection of essays *Traduire la science: Hier et aujourd’hui*, edited by Pascal Duris (2008), which has a strong historical focus, often grappling with the problems of how to translate science from a past episteme accurately into terms that are intelligible today – a theme continued by Pedro Navarro in his careful examination of four papers by Phillippe Selosse. Rodrigo Lacerda, for his part, reviews a work about translation as a social and cultural practice in the field of anthropology (*Translating Worlds: The Epistemological Space of Translation*, Carlo Severi and William F. Hanks, eds.), while Paola Mancosu assesses *Translation and Epistemicide: Racialization of Languages in the Americas* by Joshua Price (2023). None of these works use the term ‘(inter-)epistemic translation’, of course, though many of the case studies they describe would fit the EPISTRAN project perfectly. Let us hope that in the future many more will.

Finally, a word about the Epigraph, which not only sets the tone for this special issue but also opens the door to a whole new area of research. It represents a transcription of birdsong undertaken in an orchard in Worcestershire, England, with mark-making triggered in the split second of hearing birdsong as it filled the landscape. Perceived differences in bird calls (for example, the sharp intonation of wood pigeons, the gruff barking pheasants, and flowing sounds of robins) were recorded using different kinds of marks.

As an exercise in asemic writing, this is not strictly speaking epistemic translation from nature of the kind envisaged by Kobus Marais, since its author, Harriet Carter, is exploring the artistic affordances of the medium, rather than attempting to transmit senses that might be present in the source. However, it does allow us a way into a new dimension of inter-epistemic translation that was not initially contemplated in the EPISTRAN project, but which attracted some attention at the December conference – the concepts of bio-, geo- and terratranslation, or “translation systems that allow us to interact with other sentient and non-sentient beings on our planet” (Cronin 2019: 71). There is already work being done in this domain: a transdisciplinary team made up of biologists and semioticians at the University of Tartu has for some time been engaged in the study of biosemiotics and what Jacob von Uexküll dubbed Umwelt translation;¹⁰ and as for the geo- or terra-translational aspect, in addition to Karen Barad’s (2007) book about the entanglement of matter and meaning, mentioned by Marais in his paper here, some introductory work has already been produced by translation scholars Michael Cronin (2023) and Karin Littau (2023).

But this is for the future. For now, it is enough to launch the concept of (inter-)epistemic translation with the three strands that we already have. We hope that this special issue will inspire others to take it further.

Karen Bennett and Marco Neves

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¹⁰ See Kull and Torop (2012); also Marais and Kull (2016) and Marais (2019).

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EPIGRAPH

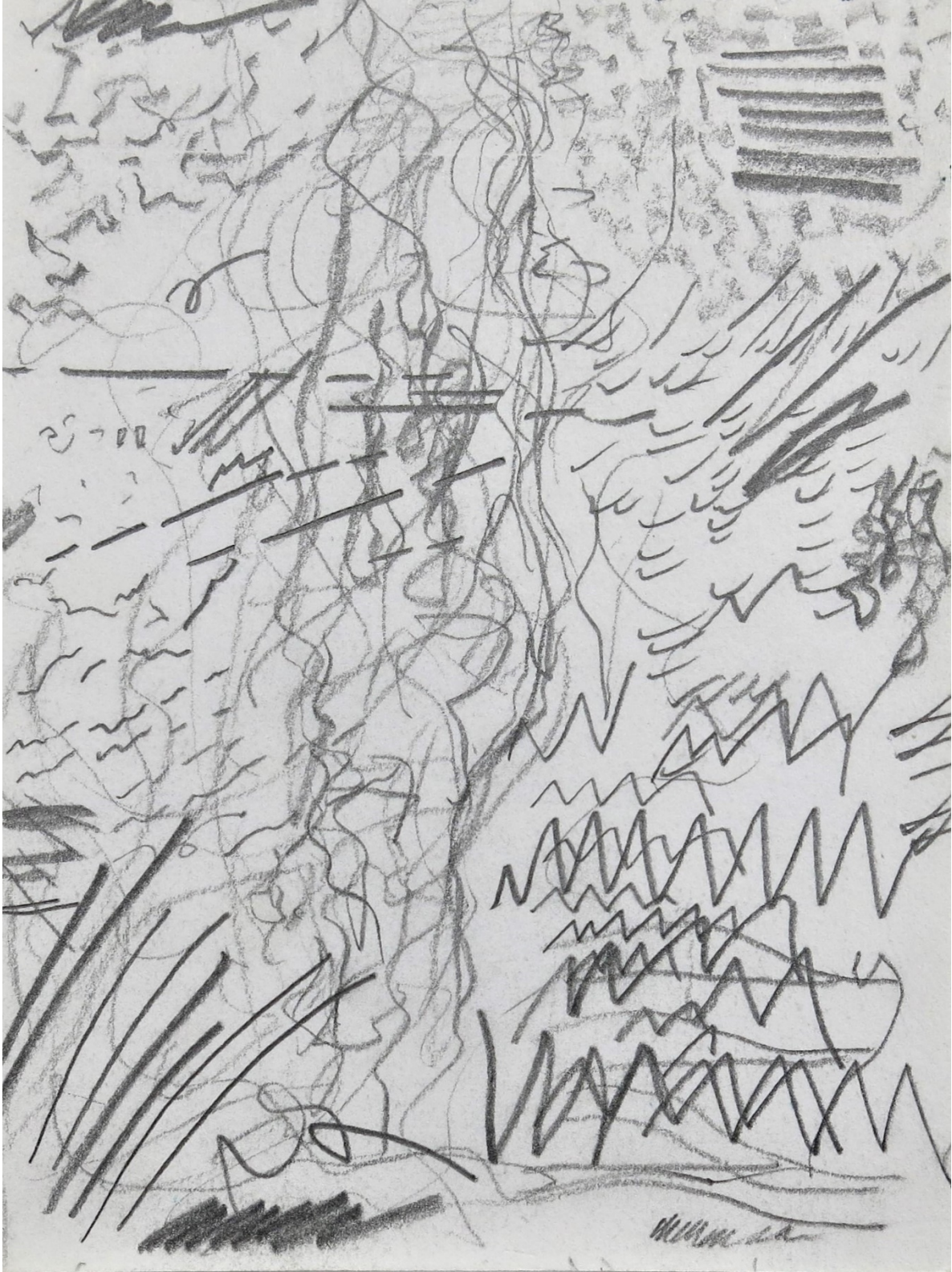


Figure 1. Harriet Carter, 2019. Transcribing Birdsong. Worcestershire orchard note page. Pencil on paper, 14.8 x 21cm. (<https://www.harrietpcarter.com>)

WHAT IS INTEREPISTEMIC TRANSLATION?¹

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ABSTRACT: This article seeks to define interepistemic translation by two different routes. The first is etiological: how the coining of the term emerged out of the author's struggles with the problems of bringing three essays from three different epistemic systems—translation, medicine, and the humanities—into rough interconnectivity. The second adopts and adapts Itamar Even-Zohar's eight hypotheses for 'transfer theory' as a provisional model for interepistemic translation.

KEYWORDS: Epistemic System, Intralingual, Interlingual, Intersemiotic, Translation, Transfer

1. Introduction

I coined the term *interepistemic translation* as translation between epistemic systems at the end of my 2017 monograph *Translationality: Essays in the Translational-Medical Humanities* (2017b, p. 200):

Perhaps we can tie together my various combinatory vectors here by rethinking Roman Jakobson's (1959) famous tripartite distinction among intralingual, interlingual, and intersemiotic translation. I suggested in passing that Richard Powers's "neurological novel", *The Echo Maker*, is a kind of intersemiotic translation, in the sense that Powers reframes the narratives in one written genre (or semiotic world), popular or "narrative" neuroscience, as a narrative in a different written genre (or semiotic world), the novel. But what kind of translation is at work in translational medicine (TM)? It is similar to what medieval thinkers called the *translatio studii*, the translation of learning, also known as the transfer or transmission of knowledge—which is never a "cloning" of knowledge, of course, but always involves what I'm calling translationality: adaptation, transformation.

Thinking about that, we might want to expand Jakobson's framework by naming the sort of translation at work in TM's *interepistemic translation*: translation from one "epistemic system" ... to another.

But what does that mean in practice?

2. One example

My subtitle for *Translationality*, "Essays in the Translational-Medical Humanities", offers one kind of hint.

The first of the book's three essays deals with the *medical humanities*—the Capgras delusion in Richard Powers' novel *The Echo Maker*. The novelist's humanistic approach to the medical condition of Capgras is to get the narrator's brother into a car accident that gives him brain damage, which manifests as Capgras. As a result, he believes she is not really his sister; she is an impostor, or a cleverly programmed android. She doesn't have

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the disorder; she embodies one human response to being a secondary victim of the disorder. Two epistemic systems—medicine (diagnosing and attempting to cure a neurological condition) and the humanities (narrating the human stories of sickness and health in a novel)—and translating between them.

The second deals with the *translational humanities of medicine*: the medical history from Galen to Rhazes to Andreas Vesalius and then to François Rabelais-the-physician (who published a translation of Galen) translated into the literary history from Rabelais-the-novelist through Thomas Urquhart’s English translation to Laurence Sterne, to say Manuel Portela’s Portuguese translation of Sterne. Again the same two epistemic systems as in the first part, medicine and the humanities, but this time the humanistic element is specifically translational, tracking the gradual interlingual and interepistemic *transformation* of a medical history into a literary history.

The third deals with the *medical humanities of translation*: translational hermeneutics in Friedrich Schleiermacher’s feeling of the foreign and Viktor Shklovsky’s feeling of the strange as the social neuroscience of empathy. Now the interepistemic encounter shifts one step further, translating the medical research feeding the social neuroscience of empathy into and through the hermeneutical history of theorizing empathy as undergirding humanistic research and the phenomenology of translating.

And the conclusion deals with the *humanities of translational medicine*: the translation not only of clinical research into patient care but of patient care into the human experience of wellness, sickness, and dying, with a focus on the 1993 play *Wit*, written by a hospice nurse named Margaret Edson, who tracks the interactions between a dying English professor and her cynical nurse.

In short, four different interepistemic translations between and among translation studies, medicine, and the humanities.

3. The definitional question

So but what *is* interepistemic translation?

I’ve just traced the genesis of the idea in one ideational process in my own work; it occurs to me that I could just as well have done the same for a dozen or so other book-length projects of mine. Science fiction and translation; Tourette’s and translation—or, rather, Tourette’s, the Longinian/Burkean/Kantian sublime, and translation; pornography and translation; transgender and translation (and translingual address); behavioral economics and translation; strange loops and translation; Daoism and translation; performativity and translation; taboo and translation. I tend in my research to tackle bridging projects, mapping the coordinates of one epistemic system onto another—typically a manifestly non-translational epistemic system onto translation. I’ve tended to think of that tendency as ‘driving a square peg into a round hole’: connecting things that don’t go together, and don’t seem likely to connect. Reframing it as interepistemic translation seems considerably more useful.

But is that all that interepistemic translation is? Is it limited to theoretical projects? Does it have no practical applications? Does it never arise out of practical projects? And what is its scope?

For example, if we think of different sign systems as epistemic systems—language, music, visual arts, and so on—wouldn't intersemiotic translation count as interepistemic translation?

And if we think of different languages as epistemic systems—certainly the Sapir-Whorf Hypothesis tends in this direction—wouldn't interlingual translation count as interepistemic translation?

And if we think of thought and verbal expression as epistemic systems, and same-language idiolects as epistemic systems, wouldn't intralingual translation count as interepistemic translation?

Perhaps interepistemic translation is the *universal form of all human communication*?

More: if we recognize the planetary importance of biosemiotic translation, eco-translation, the translation of communication between animate and inanimate entities—say, humans not just with plants but with air, bodies of water, and geological formations—perhaps interepistemic translation is the universal form of all human *and* nonhuman communication?

If there is no form of communication that is *not* interepistemic translation, how useful is the concept?

And finally: if we want to enhance its usefulness by restricting our conceptualization of interepistemic translation to narrower confines, where shall we draw the line? Should we try to make the case that interepistemic translation is all translation that is *not* intralingual, interlingual, or intersemiotic? Or should we simply say that interepistemic translation is translation whenever it is *thought of* as translation between ways of knowing and managing knowing?

4. Even-Zohar's Transfer Theory

In the lead-up to this conference, especially while reading the abstracts Karen Bennett² sent me to vet, I gave a lot of thought to questions like these, but the thought that I kept giving to them didn't seem to be bearing fruit—they kept butting up against the scalar problems of that last section and hitting a dead end—until one of the students in my doctoral seminar on critical and translation theory chose the Israeli translation scholar Itamar Even-Zohar's (1981, 1997) transfer theory for her presentation. Coincidentally, the last time I looked at those articles had been around the same time I was working on *Translationality*, for use in another 2017(a) monograph of mine, *Aleksis Kivi and/as World*

² Karen Bennett is very much the powerhouse behind this emerging interest in interepistemic translation. She found my coinage of the term in Robinson (2017b, p. 200), where it was very much a casual throwaway quip, and saw the potential for a broad-based interdisciplinary research project, which she then used to bring us all together for the Lisbon conference, and then for this special issue of *Translation Matters*. See also Bennett (2024) for an early publication on the subject.

Literature; but I had been focused then on Even-Zohar's notion of uptake (1997), and completely missed the light his emergent transfer theory (1981) could shed on interepistemic translation.

In fact that first article on transfer theory, *Translation Theory Today: A Call for Transfer Theory* (1981), just barely begins to hint at the new approach:

If this is the case, translation theory as it is today clearly is not a candidate for liquidation. On the contrary, it will become even clearer that "translation" is not a marginal procedure of cultural systems. Secondly, it will help in looking for the really particular in inter-systemic transfer (translation). Thirdly, it will change our conception of the translated text in such a way that we may perhaps be liberated from certain postulated criteria. And fourthly, it may help in locating what "translational procedures" consist of. (p. 3)

"Translation theory as it is today" is only "a marginal procedure of cultural systems," he is suggesting, and thus "a candidate for liquidation", if it is limited to interlingual translation. Studying "translation" more broadly as "inter-systemic transfer" may liberate us from "certain postulated criteria" and help us understand "translational procedures" more complexly and comprehensively.

5. Even-Zohar's Hypotheses

Even-Zohar ends the 1981 paper with eight hypotheses (pp. 6-7); let's interrogate them in series by way of applying his transfer theory to interepistemic translation.

Hypothesis No. 1. Translation theory would be more adequate if it were to become part of general transfer theory, to which it will contribute.

'General transfer theory' would include the transfer not just of texts and their meanings but of objects ('transculturation')³ and even people ('cultural translation').⁴ What happens when 'stuff' gets transferred? What happens when people cross 'borders' of all kinds (not just geopolitical ones)? This has been a recurring concern of Anthony Pym as well, from *Translation and Text Transfer* (1992) to *The Moving Text* (2004), and it informs the eighth and final chapter of *Exploring Translation Theories* ([2010] 2023) as well. "This is a world of moving texts and people, objects and subjects" (2004, p. 8), and Pym agrees with Even-Zohar that those movements can and perhaps should be called "transfers" (pp. 13-14), as they were in his earlier (1992) version of the argument. Too many readers, however,

³ 'Transculturation' was coined by the Cuban ethnologist Fernando Ortiz ([1940] 2002), adopted from Ortiz by the Polish anthropologist Bronislaw Malinowski ([1944] 1960), popularized in English by Mary Louise Pratt (1992), and borrowed for translation studies by Maria Tymoczko (2007, pp. 120-134). See also Robinson (2017a, pp. 18-19) for an application of transculturation to the economic trope of "gain/loss in translation."

⁴'Cultural translation' in the sense of the movement of people(s) is generally tracked back to Homi Bhabha's essay on Salman Rushdie's *Satanic Verses* in *The Location of Culture* (1994).

misunderstood the word; hence his use of ‘movement’ in the later version. In both books, texts move materially.

Still, the image of ‘crossing borders’ that are not physical and geopolitical but what Even-Zohar calls ‘polysystemic’ is suggestive for interepistemic translation. What happens when I need to ask whether my package has arrived but don’t know the Chinese words for ‘package’ or ‘arrive’ and so resort to mime? I have then crossed a border from verbal communication to nonverbal communication: my use of manual markers to indicate the shape and size of the box I expect and the trajectory it might have traversed in ‘arriving’ and perhaps ‘landing’ on a shelf or a table is an epistemic system that is very different from asking the question in plain ordinary Chinese.

One step ‘up’ (toward greater conventional organization) from *ad hoc* manual markers toward natural language would be the ‘manual’ (rather than ‘lingual’) use of signed languages by deaf communities—and we could ask then whether interpreting between sign languages would be interepistemic as well as ‘intermanual’ translation, and whether interpreting between a sign language and a spoken language would be interepistemic as well as intersemiotic translation.

And, less obviously, where is the border between mime as the last resort of intercultural communication among hearing persons and the gestures that accompany most intralingual ‘translation’? How often do I cross *that* border every day of my life?

Hypothesis No. 2. Inter-systemic and intra-systemic transfers will be regarded as homologous.

In the text Even-Zohar glosses the ‘systems’ between which and within which these transfers take place as “language/literatures” (p. 2), and notes that he is not taking those systems as “homogeneous, static structures” (p. 2). The implication of that latter disclaimer would appear to be that he is taking them as heterogeneous, dynamic structures, or perhaps that for him they are not structures at all but derangements, disruptions, or what Félix Guattari (1995) identifies with the Joycean portmanteau ‘chaosmoses’—but he doesn’t spell out the negated opposite he intends of ‘homogeneous, static structures.’ It seems clear, in any case, that he understands the transfers between and within systems as the primary force keeping systems in creative flux—or what Mikhail Bakhtin ([1934-1935] 1981) would call *разноречие/raznorechie* ‘heteroglossia’, the tension between centripetal stabilization and centrifugal destabilization.

The assumption that the ‘systems’ in question are languages and/or literatures, of course, tends to limit the applicability of transfer theory to interlingual and intralingual translation. Thinking ‘systems’ more broadly as epistemic systems—or epistemic orientations, epistemic dissipative systems, epistemic chaosmoses—gives us the scope to imagine a wider range of cultural expressions epistemically (and interepistemically). Think of the interepistemic and/or intraepistemic transculturation of food: not just creative/adaptive/transformational cooking and plating and serving as epistemic systems but

traveling and entering restaurants and eating as three more. And ask yourself whether the preparing of fusion cuisine and the eating of fusion cuisine are intraepistemic translations within the same system or interepistemic translations between two different systems.

Perhaps both? Perhaps neither? In any case, Even-Zohar insists that all such transfers are “in principle analogous, even homologous” (p. 2).

More specifically: if we take the chef and kitchen staff to form one epistemic system dedicated to the development and preparation of meals and the menu-designer to form another epistemic system dedicated to the representation of meals in those multimodal (word-and-image) texts called menus, then we would take the chef’s interactions with the menu-designer to constitute interepistemic translation. If we construct them as part of the same ‘restaurant’ epistemic system, under the leadership of the restaurant owner(s), their interactions would constitute intraepistemic translation.

By the same token, the diner who interacts with the menu and server to place and receive a meal order and then eats the meal can be thought of as participating in interepistemic translation (menu/reading<>food/eating) or intraepistemic translation (the various transactions involved in ‘eating out’).

Think also of the food critic, who eats the food and writes a review, and the food critic’s editor, who edits the review for publication, and the printer, who prints it, etc. Think of the scholar of international food culture who constructs numerous chefs’ and restaurants’ and national cultures’ ‘fusion’ cuisine as transculturation. Each of these in relationship with others might be thought of as participating in either interepistemic or intraepistemic translation.

And of course the interlingual translator of menus is interepistemically engaged not just with verbal menus but with many of the other collective knower-agents listed in the two previous paragraphs, and more. In the English menu I was given at one Chinese restaurant in Zhengzhou, Henan Province, 糊涂面 *hútu miàn*—a noodle soup that was a local delicacy—was translated ‘stupid face’. 糊涂 *hútu* does mean ‘muddled, silly, confused’, and 面 *miàn* does mean ‘face’ (but also ‘noodle’); but on a menu featuring local delicacies the three characters refer to a noodle soup and obviously have nothing to do with faces, stupid or otherwise. The epistemic system of restaurant menus and local dishes, of course, overlaps very little with the epistemic system of colloquial name-calling; the obvious or commonsensical reading of that translation, that it was a simple (or 糊涂 *hútu* ‘stupid’) error, would attribute that error to an interepistemic translation from the *wrong* epistemic system (‘name-calling’). I prefer to read it as a joke, a punning interepistemic translation that triangulates *three* epistemic systems, not just ‘name-calling’ and ‘English menu’ but ‘local delicacies’ as well.

Hypothesis No. 3. The product of transfer, i.e., the translated utterance/text, will not be admitted as such if and only if certain pre-postulated SL-TL relations are fulfilled.

I would emend that to read “The product of transfer, *e.g.*, the translated utterance/text, will not be admitted as such if and only if certain pre-postulated SL-TL relations are fulfilled.” Yes, sure, interlingual translation is one kind of transfer; but the whole problem of admitting “the product of transfer” as “the translated utterance/text” “if and only if certain pre-postulated SL-TL relations are fulfilled” is caused and exacerbated by the copulative identity implied by that “*i.e.*” If “the product of transfer” has to meet those pre-postulated conditions for *interlingual translation*, then there’s no need for Even-Zohar’s broader conception of transfer. Traditional translation theory will suffice.

The interesting question arises when we think more carefully about the criterial ‘pre-postulation’ of ‘transfer’ in certain source-target relations—*i.e.*, when we eliminate the restriction to *languages*. ‘Interepistemic translation’ does seem to require translation between epistemic systems—a source system, a target system, and a transfer between them. ‘Intraepistemic translation’ would involve what Even-Zohar calls ‘intra-systemic transfer’: translation within an epistemic system. If we are proposing to study both interepistemic translation and intraepistemic translation, perhaps the focus of our study should be called just plain ‘epistemic translation’. Perhaps it should also include such extensions as ‘infraepistemic translation’ and ‘supraepistemic translation’ — the translation of lower and higher epistemic levels within a single epistemic system (see Fig. 1). To my mind ‘epistemic translation’ would be a more impressively Greek paraphrase of ‘knowledge translation’, which in my experience was Salah Basalamah’s translational paraphrase of ‘knowledge transfer’ or ‘knowledge exchange’; see Robinson (2012) for my riffing on his innovation. But coming at knowledge translation from the perspective of Itamar Even-Zohar’s transfer theory would open it up to discussions at least of ‘betweenness’ and ‘withinness’ and possibly also of ‘aboveness’ and ‘belowness’.

For those of you who like arboreal binaries, here is one way of schematizing the research opportunities before us:

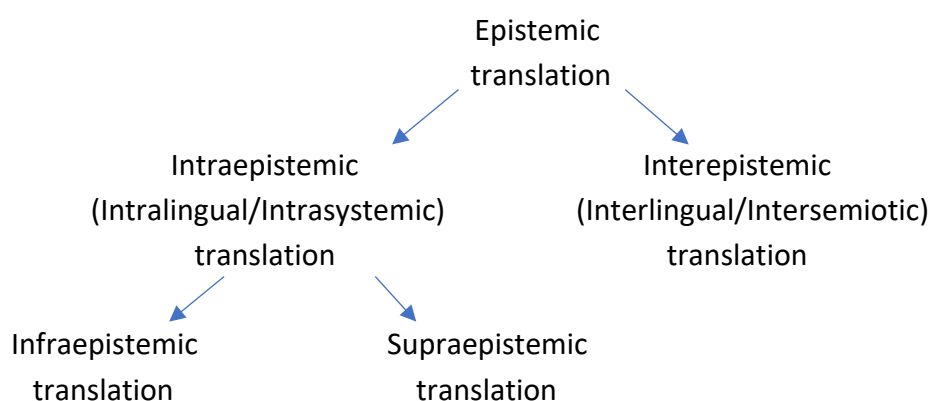


Figure 1. An arboreal schematization of the research orientations sketched in this paper

What about the distinction between translation as practice and translation as theory? Isn’t interepistemic translation as, say, cooking, or serving, or eating, quite different from

interepistemic translation as writing food criticism or scholarship on food culture? Isn't a humanistic approach to translational medicine as practiced by a humane physician with a human patient significantly different from my theoretical work in *Translationality: Essays in the Translational-Medical Humanities*?

When I was in the Ph.D. program at the University of Washington I took a class on Shakespeare, and tensions arose between me and the other five students in the class, because they were there for the 'beauty' of Shakespeare's poetry, and I was there for his brilliance as a theorist. Now, forty years later and maybe a few minutes wiser, that seems like a silly thing to fight over. Surely Shakespeare can be both a brilliant poet and a brilliant theorist?

Hypothesis No. 4. As a transferred product, not only actual texts for which a particular (individual) S text-T text relation can be demonstrated will be considered, but also T texts traceable to a specific, or several, S models.

Yes, transfer theory should consider not just a single source text/product/subject and a single target text/product/subject read as standing in a falsifiable relation of equivalence to it, but multiple source versions and multiple target versions. At the very least we should consider the relation of a single target text to multiple source texts that Karen Emmerich (2017) explores. But obviously a more radical application of Even-Zohar's transfer theory would open inquiry up first to expanding Kristevan intertextual or Barthean metatextual networks, or what Patrick O'Neill (2005) calls 'macrotextual' and 'transtextual' networks, but then further to networks of nontextual objects and subjects as well. How does the interepistemic translation of international fusion cuisine link up to the transculturation of other objects and to the cultural translation of migrants? Does the globalization of say Chinese or Mexican or Italian or Thai cuisine require or presuppose or increase the global transmigration of Chinese or Mexican or Italian or Thai subjects as 'authentic' chefs? Do our assumptions about the 'authenticity' of 'ethnic' cuisine require the 'ethnic' 'authenticity' not only of chefs but of sous chefs, servers, cashiers, and dishwashers?

And what about the ownership of those restaurants? Can an 'ethnic' restaurant be considered 'authentic' if it is owned by a rich person of the 'local' ('target-system') ethnicity, or by a multinational corporation?

How is 'authenticity' negotiated epistemically in the clashes and collisions of inter-systemic attitudes and affects? How do we negotiate 'ethnicity' in those epistemic clashes and collisions? As Len Ang (2001) asks, does a person of Chinese 'ethnicity' have to be able to speak Chinese? Do they have to have been brought up speaking Chinese as their first language? Do they have to speak other languages with a Chinese accent? Is 'authentic' 'ethnicity' a mathematical equation: 83% Chinese? Would a person who is 37% Chinese be 'less' Chinese than a person who is 38% Chinese?

These complex equations (and their debunking) should be part of transfer theory as well.

Hypothesis No. 5. For the ST-TT relation, traditionally described in terms of correspondence/non-correspondence, the question “how and why TT features are relatable to ST features” will replace the question “[why] in TT a certain ST feature is lacking.”

Obviously here Even-Zohar is still writing about *texts*. And yes, obviously a pre-DTS concern with “correspondence/non-correspondence”—or, more specifically, with “[why] in TT a certain ST feature is lacking”—needs to be replaced with the quintessentially Descriptive Translation Studies question of “how and why TT features are relatable to ST features”. But let’s take transfer theory seriously and consider the interepistemic relatabilities of source and target products and people as well.

And perhaps further, in light of hypothesis number 2, let us also consider the intraepistemic (and infraepistemic, and supraepistemic) relatabilities of intra-systemic transfers. Of course those intras can easily be reframed as source-target inters as well. Is any epistemic ‘system’ or ‘regime’ (or ‘orientation’, or ‘chaosmos’) ever just one ‘system’? It is supraeasy and maybe also infraeasy to proliferate systematicities, both horizontally in the sense of rival subsystems (Chinese vs. Mexican vs. Italian vs. Thai cuisines) and vertically in the sense of higher and lower scalar relations: Chinese cuisine and the supraepistemic question of Chinese ‘ethnicity’, or the infraepistemic question of *which* Chinese cuisine (which province, which city, which neighborhood, which family, etc., but also which Chinese ethnicity: would Islamic *halal* cuisine from Xinjiang Province count as ‘Chinese’ cuisine?).

Hypothesis No. 6. In transfer/translation, the transfer principle will be taken as a procedure, which due to the decomposition/recomposition unavoidably involved in it, processes the utterances/texts so that they behave differently from the source.

Yes: this is what is known as process philosophy. Translation is always transformation. Translationality is the becomingness or processuality of process philosophy. The point to add to Even-Zohar’s formulation of this hypothesis, however, is that ‘the decomposition/recomposition unavoidably involved in it’ unavoidably also destabilizes both the source and the target, and indeed destabilizes our perception of both ‘decomposition’ and ‘recomposition’. Decomposition implies the destabilization of a stable source state; but Even-Zohar’s own insistence that “translation” is not a marginal procedure of cultural systems—that translation *creates* cultural systems by continually decreasing and recreating them—should make it clear that our assumption that *the source state is stable* is an idealization, a reification, the imposition not only of an idealized order but the retrospective attribution to that idealization of ‘reality’ or ‘truth’. Similarly, of course, the ‘recomposition’ of the ‘decomposed’ ‘source’ as a stable ‘target’ state is another idealization. As Deleuze and Guattari (1980; 1987) would put it, there are lines of flight, and those lines partake in deterritorializations and reterritorializations.

Hypothesis No. 7. This translational procedure (Hypothesis 6) is only the most basic processing principle for a TT. The specifics of that processing are determined by a complex hierarchy of semiotic constraints, the strongest being models governed by the positional oppositions within the target PS.

I would say that 'the specifics of that processing' are not so much *determined* as they are *constrained* and *conditioned* by semiotic constraints, which exist not in a 'complex hierarchy' (what Deleuze and Guattari would call an arboreality of branching binary gates, as in Fig. 1 above) but in a rhizomaticity, like crab grass. And sorry, but 'positional oppositions within the target PS' will not do. If Even-Zohar is so determined *not* to understand systems as "homogeneous, static structures" (p. 2), he has to give up this notion of a static positionality within 'the' target polysystem.

In the introduction to *Parables for the Virtual* ([2002] 2021, pp. 2-8) Brian Massumi critiques this scientizing move of positing or positioning, reading 'positionality' or 'positioning on a grid' as static binary coding. In the traditional translation studies that Even-Zohar challenges, that coding would obviously entail categories like originality vs. derivativity, fidelity vs. infidelity, and word-for-word vs. sense-for-sense. Corpus-based studies of 'translator style' and 'narratoriality', of course, code translator identities with revisionary binaries that are historically progressive: where earlier The Original Writer had One Style and The Translator was only *faithful* to that Style without developing one of His (normatively not Her or Their) own, now it's possible to assign One Style to The Translator as well—as long as it is derived quantitatively by aggregating inert three-word colligations in a corpus. The Translator's Style can be countenanced so long as it is *coded*. It may even be reassuring because it is static and singular and algorithmically depersonalized.

"The idea of positionality", Massumi says, "begins by subtracting movement from the picture" (p. 3). "For structure," he adds later, "is the place where nothing ever happens, that explanatory heaven in which all eventual permutations are prefigured in a self-consistent set of invariant generative rules" (p. 29). In corpus studies The Translator's Style does not move. It does not change or even twitch. It is a rock. It is emphatically not an event.

"This catches the body in a cultural freeze-frame", Massumi writes. "The very notion of movement as qualitative transformation is lacking. There is 'displacement' but no transformation; it is as if the body simply leaps from one definition to the next" (p. 3). In his pithy summary "the space of the crossing," which is to say "the gaps between positions on the grid, falls into a theoretical no-body's land" (p. 4). Not a transfer: an inert space where nothing ever happens.

By contrast, in the process-philosophical revolution imagined by Henri Bergson "position no longer comes first, with movement a problematic second" (cited in Massumi, [2002] 2021, p. 7). Rather, position "is secondary movement and derived from it. It is retro movement, movement residue" (p. 7). In the "event," he argues, "nothing is prefigured". For him the event "is the collapse of structured distinction into intensity, of rules into

paradox” (p. 29)—though I would protest that ‘paradox’ is still a logical structuring of distinction. Leave it at ‘intensity’.

Viewed through that movement/event lens, stasis becomes difficult to explain. How can it even exist? “Another way of putting it”, Massumi adds, “is that positionality is an emergent quality of movement” (p. 8). Indeed in this view emergence is all: “It is not enough for process concepts of this kind to be ontological. They must be *ontogenetic*: they must be equal to emergence” (p. 8).

Hypothesis No. 8. Under the TS constraints, the relatability of a TT to a ST, or of T model to a S model, depends on the state of the target PS, which, through the repertory of its models, functions as the strongest constraint.

This works pretty well—especially if we recognize the continuous destabilizing effects of transfer on ‘systems’ and ‘states’. To the extent that ‘the state of the target PS’ depends on the relatabilities of the various transfers that are continually creating and decreasing it—depends on the *movement* of all states, states as *events* rather than static structures—yes, ‘the relatability of a TT to a ST, or of T model to a S model, [also] depends on the state of the target PS’. The whole intersystem is a dissipative system teetering on the edge of chaos. And if that chaotomic ‘state of the target PS’ ‘functions as the strongest constraint,’ that constraint, and indeed the strength of that constraint, is everywhere *in* rhizomatic *tension* (generating *in-tensity*) with every other constraint.

6. Conclusion

Let me conclude, then, by restating Even-Zohar’s eight hypotheses for interepistemic translation.

IEZ/DR Hypothesis No. 1. Translation theory would be more adequate if it were to become part of general transfer theory, to which it will contribute by spanning intralingual, interlingual, intersemiotic, intraepistemic, and interepistemic translation events.

IEZ/DR Hypothesis No. 2. Inter-systemic/epistemic and intra-systemic/epistemic transfers, as well as infra-systemic/epistemic and supra-systemic/epistemic transfers, will be regarded as homologous.

IEZ/DR Hypothesis No. 3. The admission of the product of transfer as such will not be made contingent on the fulfillment of certain pre-postulated SL-TL relations.

IEZ/DR Hypothesis No. 4. Transferred products typically exist in multiple instantiations, originating in multiple source texts/objects/subjects and culminating (at least temporarily) in multiple target texts/objects/subjects, thus constituting large-scale intertextualities that most often radically exceed traditional verbal textuality.

IEZ/DR Hypothesis No. 5. The relatabilities of various early and late stages of transfer should be constructed not in terms of the “accuracy” of their “reproduction” but rather in terms of “how and why target features are relatable to source features.”

IEZ/DR Hypothesis No. 6. In transfer/translation, the transfer principle will be taken as a decomposition/recomposition procedure that inevitably decomposes and recomposes not only the transferred product but the very source and target states that are imagined as the stable origins and destinations of the transfer, and the very procedures of decomposition and recomposition.

IEZ/DR Hypothesis No. 7. This translational procedure (Hypothesis 6) is only the most basic processing principle for a target product. The specifics of that processing are determined by a rhizome of semiotic constraints characterized by affective intensity.

IEZ/DR Hypothesis No. 8. The strength or weakness of those constraints (Hypothesis 7) is always a local (target-side) event conditioned interactively by past, current, and possibly future events of transfer, and thus of dynamic relations with the source-side as well.

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SCIENCE POPULARIZATION AS INTEREPISTEMIC TRANSLATION: AUGUSTO CÉSAR DE MIRANDA AZEVEDO'S POPULARIZATIONS OF DARWINISM IN 19TH CENTURY BRAZIL

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ABSTRACT: This paper aims to answer the call for a transdisciplinary approach in addressing science popularization (SP) by bridging Translation Studies, Science Communication, and the History of Science. Embracing the 'continuum model', it understands SP as an inseparable part of science communication, challenging the 'diffusionist model' that isolates scientists from the public. The study delves into the connections between SP and translation, advocating for a broader perspective, emphasizing the concepts of interepistemic translation and translationality. Using a case study on the dissemination of Darwinism in Brazil, the paper demonstrates the relevance of this approach by tracing the translational path from Charles Darwin through German intellectuals Heinrich Georg Bronn, Ernst Haeckel, and Ludwig Büchner to Brazilian popularizer Augusto César de Miranda Azevedo, emphasizing translation's pivotal role in the global circulation and transformation of scientific knowledge.

KEYWORDS: Augusto César de Miranda Azevedo; Heinrich Georg Bronn; Ernst Haeckel; Ludwig Büchner; Reception of Darwinism; Translationality; Interepistemic Translation.

1. Introduction

This paper aims to answer the call made by translation theorists Arduini and Nergaard (2011), Gentzler (2017), and Bassnett and Johnston (2019), amongst others, for translation to become as a research tool in a new transdisciplinary paradigm. By applying the concepts of 'translationality' and 'interepistemic translation' (which will be properly explained below), it hopes to launch a conversation about science popularization (SP)¹ involving the fields of Translation Studies, Science Communication, and History of Science.

The paper is divided into three sections. First, a brief literature review is presented to define SP and to establish its links to translation. It is shown that SP has been associated with translation both negatively and positively in metaphorical and non-metaphorical ways. More systematically, SP has been understood as intralingual translation by many authors. Thus, it is asked if this interpretation is enough to explain SP as a whole and what else could be fruitful for developing our understanding of it.

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¹ The terms to designate the act of communicating science ('science popularization', 'vulgarization', 'divulgarization', 'journalism', 'communication', and so on) have their own histories and complexities both in English (Topham, 2009) and Portuguese (Vergara, 2008) and are not really standardized nowadays (see, for example, Bueno's (2010) definition of '*comunicação científica*' and '*divulgação científica*' and Sterk's and Goch's (2023) definition of 'science communication' and 'science journalism'). In fact, a quick search on *Google Scholar* results in more than 500.000 entries for 'science communication', over 10.000 for 'science popularization', and only a little over 2.000 for both terms together, suggesting that there is no consensus on which term should be used for what (queries conducted on 6 mar 2024). 'Science popularization' was chosen for the purposes of this paper because it encapsulates better the act of communicating science to the masses in the 19th century (see Lightman (2007), for example) while 'science communication', on the other hand, seems to relate more to the current academic field of research on this topic and to current practices of communicating science beyond just popularizing it.

To answer such a question, in the second section, the concepts of interepistemic translation and translationality are introduced. It is argued that they are fruitful avenues of research for understanding the movement of ideas across the world, taking into account the interepistemic translation that happens between different scientific cultures and the translational aspect of these movements including, of course, SP.

Lastly, a case study is presented: the translational path from Darwin's *On the Origin of Species*, passing through the German intellectuals Heinrich Georg Bronn, Ernst Haeckel, and Ludwig Büchner to the Brazilian Augusto César de Miranda Azevedo fifteen years later in a chain of interlingual and interepistemic translations including popularizations.

Thus, two arguments are put forward. First, post-translation studies (Arduini and Nergaard, 2011; Gentzler, 2017) are in fact a fruitful transdisciplinary avenue which can provide insightful perspectives for our case study in the History of Science. Second, it is advanced that the history of the reception of Darwinism in Brazil can be understood as a translationality chain that goes through multiple interepistemic translations from Darwin to German naturalism until finally arriving in Brazil. Such a perspective not only shows a new field of application for the concepts of Translation Studies but also answers the recent call from History of Science to understand science as a communicative process encompassing the circulation and transformation of knowledges around the world and through time.

2. Translation and Science Popularization

Before drawing a parallel between SP and translation, it will be helpful to properly define SP. The current understanding of SP was born in response to what is now known variously as the 'Metornian model' (Cloître and Shinn, 1985), '*paradigme de troisieme homme*' (Jacobi, 1985), 'canonical account' (Shapin, 1990), 'dominant view' (Hilgartner, 1990), 'diffusionist model' (Cooter and Pumfrey, 1994), 'deficit model' (Bensaude-Vincent, 2009), among others (Bucchi, 1998, p. 149), all of which hold that scientists and the general public occupy separate realms, and that knowledge produced by the former should be communicated unidirectionally to the latter. The argument is that, due to the high degree of specialization of scientific discourse (especially after the 19th century), a simplification is needed for the public to be able to access it, a transformation of form without tampering with the content. This results in a divide between a consumer/receiver public and a producer/sender science, that isolates scientists from any influence coming from the public, which, for its part, is supposed to receive an 'altered' version of the knowledge originally produced (Whitley, 1985; Meadows, 1986; Myers, 2003).

However, since the 1980s, this simple diffusionist model has fallen out of favour with historians and sociologists of science, discourse analysts, scientific communication scholars, and translation scholars (Whitley, 1985; Cloître and Shinn, 1985; Jacobi, 1985; Hilgartner, 1990; Cooter and Pumfrey, 1994; Wynne, 1995; Drouin and Bensaude-Vincent, 1996; Bucchi, 1998; Grundmann and Cavallé, 2000; Myers, 2003; Secord, 2004; Topham, 2009; Daum, 2009; Wright, 2011; Gavroglu, 2012; Hochadel, 2020). Instead, many

continuist models have emerged, which approach SP as something inseparable from ‘science proper’ (Whitley, 1985; Cloître and Shinn, 1985; Jacobi, 1985; Hilgartner, 1990), until we at last arrived at Secord’s (2004, pp. 661, 670) call for “eradicating the distinction between the making and the communicating of knowledge” and for the abandonment of “popular science” as a neutral descriptive term. This new model presents a dialectic view of science and the public where the latter is also an active agent in communication. More than that, the public is not necessarily lay, nor clear-cut since popularization also happens among specialists in the same field and among specialists from different fields. Thus, popularization is an integral part of science and performs rhetorical, discursive, ideological, and political roles both inside the scientific realm and outside of it (being consumed as entertainment in magazines or fictional literature for example). Moreover, SP is not a homogeneous category. It has changed over the centuries and nowadays encompasses texts as seemingly disparate as science fiction novels, grant proposals, and press releases, just to give a few examples.

Such a change in conception from an ‘altered’ text to be judged according to its fidelity to an ‘original’ to a two-way model that recognizes that the transformation of the text is a process that deserves to be studied in its own right will probably sound familiar to translation scholars. However, the similarities between scientific popularization and translation do not end here.

It is difficult to peruse the literature on SP without coming across the term ‘translation’ being used more or less rigidly or metaphorically². Thus, the act of popularizing science has already been associated with different views regarding translation, ranging from those that see it as a potentially distorting process or as a mere search for equivalents to others that recognize it as a complex process encompassing not only linguistic phenomena but also social and philosophical issues.

For example, Authier (1982), still following a diffusionist model, states that science popularization³ is a reformulation of a first discourse (D1) into a second discourse (D2), and thus can be found in a set of writings that includes conventional interlingual translations, abstracts, adaptations, rewritings, and so on, that each cater to a specific public. However, for Authier (1982, p. 35), SP cannot be called a translation, because translations “*se substituant au texte D1 comme équivalent. Son travail de reformulation peut demeurer implicite au point que l'on peut ignorer que D2 résulte d'une traduction*”, while a second discourse resulting from SP presents itself as a heterogeneous and explicit reformulation that constantly refers back to its source text. Zamboni (1998) disagrees with Authier by taking SP not to be a reformulation at all, but rather the formulation of a new autonomous discourse. However, precisely because SP is no longer a reformulation, she also believes

² For example, a simply search for ‘translat’ (or ‘tradu’ in Portuguese) in the volumes edited by Shinn and Whitley (1985), Bucchi and Trench (2008), and Porto, Brotas and Bortoliero (2011) returns 41, 12, and 31 occurrences respectively.

³ ‘*Vulgarisation scientifique*’ in her words.

that it cannot be taken as translation.⁴ Bucchi (1998, p. 3), for his part, states that considering the mediation of science for the public metaphorically as translation reduces it to a “mere matter of linguistic competence”. Even Jacobi’s (1985) and Myer’s (2003, p. 266) critiques of the diffusionist model associate SP with translation as a process of altering, distorting, and simplifying the original scientific discourse. A passage by Peters (2008) exemplifies this understanding of translation concerning SP:

Public communication of science cannot be understood as ‘translation.’ Translation would require structural equivalence of source and target language, and a shared reality serving as background for making sense of information. There is neither equivalence of scientific and everyday language, nor a shared reality. The worlds of modern science are esoteric and rather inaccessible to everyday reasoning (Peters, 2008, p. 138).⁵

By stating that SP is not translation, these authors reveal what they think translation is. In this negative space, we see translation as a reproductive activity resulting in a target text that hides the fact that it is a translation by being able to be read fluidly by the target reader as if it were an original. Equivalence is key in this process (Zamboni, 1998, p. 105; Bucchi, 1998, p. 3; Peters, 2008, p. 138) as it is the criteria for distinguishing between “reformulations” and effectively new writings. Needless to say, under this rather outdated view, SP cannot really be seen as translation. However, many other authors have remarked that, when translation is understood more generously as a creative, transformative process, then it is very productive for understanding the popularization of science, as will be discussed below.

Topham (2009), praising Secord’s (2004) focus on understanding science as the circulation of knowledge, stresses the need for science to be taken as a communicative process. According to him, this not only reintegrates SP into science but allows for the use of resources developed by other disciplines, including translation studies, to enrich the historiography of science (Topham, 2009, pp. 19-20). For example, in her study about the history of the term ‘*vulgarização científica*’ (science vulgarization), Vergara (2008, pp. 138-139) states that the idea of translation was present since its first definitions in the 19th century and shared with translation “*o limite na transmissão dos conteúdos; a preocupação de estar ao alcance de todos e assim conferir um efeito universal ao conhecimento; além de carregar consigo também a centelha do novo.*” Vergara (2008, p. 144) argues that scientific discourse needs to be translated into everyday discourse in order to bring scientific community and the public together. She believes that it is wrong to understand translation as an inferior non-creative discourse and that untranslatability issues should not weigh on popularization efforts.

Amongst Translation Studies scholars, Wright (2011, p. 9) includes SP as a heterofunctional translation, meaning that the SP target text has a different purpose than

⁴ See Zamboni (1998, pp. 76, 96). However, despite this, Zamboni keeps employing the term ‘translation’ metaphorically throughout the text.

⁵ These words remain in Peters (2014, p. 78), the second edition of the work.

the original scientific source text. Esteves (2014), for her part, points out that the main goal of both processes (translation and SP) is the same, namely to make knowledge previously out of reach available to people who do not speak the language (including technical language), and brings up the question of interpretation and power; after all the translator is also a reader and the text he or she produces wields power to convince the final reader of anything. In that lies an ethical responsibility of producing an appropriate target text. Perhaps most interestingly, she discusses the problem of equivalence, making clear that a perfect 1:1 correspondence is impossible as it entails a copy of the source text, defeating the purpose of translation. This, however, also brings the SP and translation together in the sense that both need to discuss what will be 'lost' in the target text and the limit of what can be transmitted in any act of communication. According to Esteves (2014, p. 45), this limit of transmission appears as a paradox in SP because expertise is needed to render technical language into everyday language, so "*é para leigos, mas tem mais chances de ser traduzido corretamente se quem fizer a tradução for um não-leigo*". More recently, Bennett (2024, forthcoming) pointed out that Martin and Veel (1998, p. 31) and Fuller (1998, p. 35) understand SP as a translation (albeit in a metaphoric sense) from scientific language into common non-specialized language, thus enabling methods from descriptive translation studies (DTS) to be used to analyze popularizations.

Moreover, SP has often been understood as a kind of 'intralingual translation' or 'rewording', defined by Jakobson (1959, p. 233) as "an interpretation of verbal signs by means of other signs of the same language".⁶ In fact, Machado (2014, p. 243) applied Jakobson taxonomy to scientific translation, aligning interlingual translation to the translation of science texts between different languages, intersemiotic translation to the production of concepts in science (going from abstract ideas to written or spoken words), and, of course, intralingual translation to SP and scientific literacy. In practical terms, popularization as intralingual translation has already been applied with the intent of improving communication at least in the fields of law (Rizzo, 2015), medicine (Wermuth and Verpaletse, 2018; Muñoz-Miquel, 2021), and economics (Bania and Faridy, 2020).

Thus, in contrast to the view espoused by the first authors cited above, the more recent authors associate SP and translation in a more positive way. By seeing SP as translation, they can draw concepts from translation studies to think or rethink SP concepts, enriching both fields. By understanding SP more specifically as intralingual translation, one gains access to a new approach to study has proven to be fruitful to the study and improvement of communicating science judging by the papers cited above.

However, one may go further and ask: is the intralingual translation perspective enough to explain SP as a whole? By going beyond translation as a metaphor, as put forward by the post-translation approach (Arduini and Nergaard, 2011, Gentzler, 2017), it

⁶ See Zethsen (2009) and Zethsen and Hill-Madsen (2016) for more recent appraisals of intralingual translation and its situation in Translation Studies. It is important to note that 'expert-lay communication', in Zethsen's terms, is considered as intralingual translation from the get-go and there seems to be no reason to not include at least some types of SP under this category.

is possible to break free from text-based bias and apply Translation Studies methods and theories to the study of knowledge flows between different discourses and disciplines, between different epistemic systems (different ways of interpreting the world), in a process called ‘interepistemic translation’.

3. Science Popularization as Interepistemic Translation

Within the context of what Nergaard and Arduini (2011) have called ‘post-translation studies’ (also termed as “outward turn” by Bassnett and Johnston (2019, p. 186)), authors like Blumczynski (2016), Cronin (2017), Robinson (2017), Gentzler (2017), Marais (2019), and Bennett (2024) worked on shifting the understanding of translation as a purely text-based phenomenon to a process (a ‘how’) that can be found anywhere. Translation, thus, is seen as a semiotic process and therefore ubiquitous in nature. Here lies translation’s transdisciplinarity, which makes it helpful to understand virtually all fields of knowledge and their relations to each other.

Amidst these developments in translation theory arose the concept of ‘interepistemic translation’. It was first employed by Robinson (2017, p. 200-202), somewhat tentatively, to designate translation between epistemic systems. It is described as:

Similar to what medieval thinkers called the *translation studii*, the translation of learning, also known as the transfer or transmission of knowledge – which is never a ‘cloning’ of knowledge, of course, but always involves what I [Robinson] am calling translationality: adaptation, transformation (Robinson, 2017, p. 200).

Robinson’s concept of ‘translationality’ emphasizes the transformations that every text goes through as it circulates in different cultures in space and time, ever-changing in unexpected ways in its new performances, rewritings, and rereadings. Translationality and interepistemic translation, thus, are intertwined concepts for a translational chain of transformations will go far beyond from just changing languages, it will go through changes of genre, media, areas of knowledge, and even perception. Robinson does not make explicit what he means by ‘epistemic system’, but judging from his list of interepistemic translations (Robinson, 2017, pp. 200-201), an epistemic system could be described as the overall context of communication ranging from the internalization of experience through perception to research practices and applications or entertainment presentations like literary and audiovisual works. Any movement between these contexts entails transformations in the form of writing, adaptation, reformulation, field application, and so on. Each of these transformations in the translationality chain presents an instance of interepistemic translation.

Recently, Bennett (2024, p. 2) and Neves launched the EPISTRAN project, an initiative to operationalize and refine interepistemic translation as a heuristic tool. It is defined as “using concepts, methods and theories from the field of Translation Studies to investigate the semiotic processes (verbal and nonverbal) involved in the transfer of information

between different ‘epistemic systems’” focusing on the translation flows between the western science epistemic system and the epistemic systems of the Humanities, indigenous knowledges, and (more importantly for the purposes of this paper) popularizations.

Regarding SP, Bennett (2024, forthcoming) has developed a methodology for studying popularizations as interepistemic translations. Drawing on the work of linguists Halliday and Martins (1993) and Martin and Veel (1998), she argues that scientific discourse is itself a translation from the clausal mode of primary perception into a highly nominalized and impersonal style. Thus, by going the opposite way, scientific popularizations would be translations back into standard non-specialized discourse and, therefore, would also be eligible for the methods, tools and theories developed by Translation Studies. However, whereas Bennett advances a DTS approach in her case study of SP, in this paper, I would like to present a History of Translation approach similar to Robinson’s (2017, pp. 47-128) account of the translationality present in the transmission of Galen’s medical knowledge to Rhazes, Vesalius, Burton, Rabelais, Urquhart, Motteux, Ozell, Sterne until Portela through a series of translations, adaptations, and popularizations. Bennett (2023; 2024, p. 10) also advances this program by proposing that translation be understood as a vertical diachronic process that grounds the production of new knowledge in the various knowledges that have come before, stating that “all researchers are, to some extent, involved in charting translational processes that are constitutive of modern science (broadly defined) and in observing the changes that take place as scientific and philosophical texts and ideas circulate through time and place”.

Thus, this paper focuses on highlighting the translational aspect of the circulation and reception of scientific ideas into different socio-historical contexts, crossing not only the epistemic divide between scientific discourse proper and SP discourse, but also between different scientific epistemic systems. The paper’s interest, thus, lies not in the interepistemic translation that happens in popularization *per se*, but in the movement of knowledge across the world to which popularization is embedded. For such a goal, I present the long path traversed by the ideas contained in Charles Darwin’s *Origin of Species* (1859, 1st ed.), going through Heinrich Georg Bronn’s, Ernst Haeckel’s and Ludwig Büchner’s texts (both ‘proper’ interlingual translations and interepistemic translations)⁷ until they were first publicly discussed more than fifteen years later in pre-Republican Brazil in the popularizations of Augusto César de Miranda Azevedo.

4. From England to Brazil (with Stops in Germany)

Augusto César de Miranda Azevedo was a Brazilian physician, popularizer of Darwinism, professor of medicine, and Republican politician. His life and works have received considerable attention from historians of science, especially due to his early dissemination

⁷ As pointed out by Cid (2004, p. 65), French Positivism is also present in Miranda Azevedo’s popularization but this aspect will not be covered in this paper due to space limitations. However, it must be remembered that multiple source texts (known as ‘compilative translation’) are a given for the EPISTRAN project, especially in SP (Bennett, 2024, pp. 8-9; 2024, forthcoming).

of Darwinism in Brazil; indeed, he was one of the first to discuss the subject in his M.D. dissertation, as well as in the series of public lectures, aimed at a broader audience, that followed (Miranda Azevedo, 1875; Miranda Azevedo, 1876).⁸ Despite a number of studies into his life and work (Collichio, 1988; Cid, 2004; Carula, 2009; Waizbort, 2012), the translational aspects of his output remain unexplored.

Issues pertaining to interlingual translation are interwoven into Miranda Azevedo's life and work. A native speaker of Portuguese at a time when French, German and English dominated the scientific landscape (Gordin, 2015), and living in a country very influenced by Frenchism (Wyler, 2003, p. 60), the physician was part of a Republican group associated with popularization periodicals that featured various translations. This group believed that it was necessary to translate European repertoires into Portuguese in order to disseminate them to a wider number of citizens in the hopes of eventually changing the country's political landscape (Alonso, 2002). Although he read mainly in French (Collichio, 1988, p. 34), the sources cited in his dissertation also cover English, Latin, and Italian, as well as Portuguese (Miranda Azevedo, 1875), and he displayed a clear awareness of the need for translation to export South American knowledge to Europe when he meant to translate his (never published) *Diccionario Biographico Ilustrado da América do Sul* into French.⁹ He proofread Alberto Löfgren's translation from German into Portuguese of *O Estado de Direito entre os Autochtones do Brazil* authored by Carl F. P. Von Martius (1794-1868) (von Martius, 1906), and revealed his thoughts on translation in his public lectures at *Conferências da Glória*, where he lamented the unavailability of a Portuguese version of Darwin's *On the Origin of Species* (Miranda Azevedo, 1876, p. 55). He finally made his views on translation explicit in a preface for *Cartas Inéditas* by Priest José de Anchieta (1534-1597), translated from Latin by João Vieira de Almeida, favouring fidelity and equivalence between source and target texts over a more domesticated approach (Miranda Azevedo, 1900).

However, I contend that Miranda Azevedo also played a role as an interepistemic translator not only by translating scientific specialized knowledge to a broader audience but also by being at the end of a long chain of translationality of Darwin's ideas. Perhaps the best way to study this long and complex process is to start at the beginning: the publication of *On the Origin of Species* by Charles Darwin in 1859.

Darwin called the *Origin* an abstract of his 'big book', one that he had been writing since 1856 and which Stauffer (1975, p. 10) calculated would reach 750 pages if Darwin had not met with Alfred Wallace's independent discovery. Maybe it is too hasty to call the *Origin* a popularization of the 'big book' since the latter was never published, leaving the former to occupy the place of source text for future translations. Also, the *Origin* was

⁸ Out of his seven lectures on Darwinism, only the first one was transcribed and published. Although accounts of the other lectures survived in newspapers of the time, an analysis focused on the first lecture is enough for the purposes of this paper.

⁹ *A Opinião Nacional*, 1892, 3. p. 2. Available at: <https://memoria.bn.br/DocReader/docreader.aspx?bib=378020&pasta=ano%20189&pesq=&pagfis=10> (Accessed: 6 mars 2024).

presented as a proper, even if somewhat unorthodox, scientific text (Secord, 2000, pp. 508-510). Despite that, some Darwin scholars have pointed out that the condensed nature of the book played a part in its reception (Johnson, 2007, p. 529; Horton, 2008, p. 577; Sloan, 2009, p. 78; Sloan, 2019) and even Darwin showed some concern regarding the ‘popularity’ of the book¹⁰ which would suggest that our chain of translationality had its start in the very origin of the *Origin*. Nevertheless, the first major interepistemic translation in this chain happened alongside the book’s first translation into German by the naturalist Heinrich Georg Bronn (Darwin, 1860).¹¹

According to Gliboff (2008, p. 151-152), the misunderstandings and criticisms surrounding Bronn’s translation (coming even from Darwin himself) resulted from a fundamental problem of terminological interpretation not only due to linguistic barriers but also to different ways of conceiving nature. After all, Bronn was an acting naturalist with his own theories, and translating the *Origin* into German was not a question of just changing English words to German equivalents, but of making sense of it in relation to the German scientific landscape.

Bronn was invested in advancing his studies as a *Wissenschaft*, that is, a scholarly pursuit with “a strong emphasis on the unity of all the life-phenomena and all the sciences as well as on the orderliness of nature and the rule of law in both the organic and inorganic realms” (Gliboff, 2008, pp. 30-31). He had developed his own theory of species change in which species went extinct as their adaptations no longer were of use in relation to their environment; however, he lacked well-defined laws to explain the origin of life and new species, and that was what he was looking for when he read Darwin’s *Origin*. This was a vain pursuit, as Darwin did not provide explanations for how variations came about, but instead provided a theory to explain how individual characteristics could be retained and passed down through the generations, eventually giving rise to different species. Bronn’s theory was also more holistic, and one of his main points of contention regarding Darwin was the lack of an origin for life itself, a subject Darwin consciously did not discuss. Although Bronn agreed with Darwin’s ‘struggle for life’, selection and continuous adaptation, he did not want a mechanism, but general natural laws to explain the tendencies observed in species (Bronn, [1860] 1973; Gliboff, 2008; Richards, 2008, pp. 69-70; Johnson, 2020, p. 295). Furthermore, not having had so much contact with natural theology and animal and plant breeding in his German intellectual upbringing, the analogy between artificial and natural selection did not make much sense to him (Gliboff, 2008, pp. 132-133, 152-153). Thus, under such different intellectual perspectives, the situation was bound to present translation issues.

¹⁰ See Letter 2441, from Darwin to John Murray, March 31, 1859. Available at:

<https://www.darwinproject.ac.uk/letter/?docId=letters/DCP-LETT-2441.xml> (Accessed: 6 Mar 2024).

¹¹ Bronn’s translation was based on the second edition of the *Origin*. A second German translation by Bronn was published in 1863 based on the *Origin*’s third edition, thus with some alterations on the text, but none in the translator’s afterword (Gliboff, 2008, pp. 123-125).

First, there was not a translation for ‘selection’ that kept all the senses in which Darwin employed it. Bronn was not interested in the comparative aspect of ‘natural’ and ‘artificial selection’, but in presenting a general law of species change, thus arriving at the term ‘*Züchtung*’ (meaning roughly ‘stock breeding’) for artificial selection, and a number of other terms for natural and sexual selection. According to Gliboff (2008, pp. 136-137), Bronn chose not to use terms that implied explicit agency or a “selector” [‘*Wähler*’], but in doing so, Darwin’s three types of selection (natural, artificial, and sexual) did not seem like the same process in the German translation (Gliboff, 2008a, pp. 136-138; Johnson, 2020, p. 294). Translating ‘origin’ was also problematic. Bronn chose ‘*Entstehung*’ instead of ‘*Ursprung*’, close terms commonly used interchangeably until then; nonetheless, the choice was later criticized by the second German translator of the *Origin*, Victor Carus, who stated that ‘*Entstehung*’ subtly meant origin as a continuous developmental process rather than a proper origin as a single event (Gliboff, 2008a, pp. 142-143). Finally, words like ‘perfection’, ‘progress’, ‘improvement’, and so on, used interchangeably in the *Origin*, prompted Bronn to translate them mainly as ‘*Vervollkommung*’. In the same way as Darwin had redefined such old teleological and morphological terminology to refer to the competitive capacities of life forms (see Darwin, 1859, pp. 336-337, for example), Bronn employed his term to draw Darwin’s terminology closer to that of German morphologists. Having this in mind, Gliboff (2008, p. 142) states that it is unjust to label Bronn as a German transcendentalist without extending the label to Darwin as well.

The collective uneasiness that surrounded Bronn’s translation eventually prompted a retranslation (or, more precisely, a revision) by Victor Carus (Darwin, 1867). Carus (like Haeckel and Büchner, who will be discussed below) represented a new generation of naturalists that hoped to break free from traditions and embrace the new Darwinist school, an intellectual reform that could not preclude translations. According to him, “because he [Bronn] was a ‘natural philosopher’ of the old German school [‘*Naturphilosophie*’]¹² or because he was too much of a describing Zoologist, he was too anxious to allow your [Darwin’s] work to act freely upon the German public”.¹³ In light of that, Carus offered himself to retranslate the book and let Darwin free in Germany.

However, by the time Carus’s translation was published, Bronn’s text had already circulated widely giving access to Darwin’s ideas to German thinkers that would greatly develop and disseminate Darwinism, such as Ernst Haeckel and Ludwig Büchner (Büchner, 1869, p. 27; Gliboff, 2008, p. 156; Richards, 2008, p. 68). Bearing in mind that Miranda Azevedo was accused of perhaps not even having read Darwin, but only Haeckel’s account of Darwin (Waizbort, 2012, p. 348), it is important to give attention to that author’s translational take on the subject.

¹² This is not a consensus nowadays. While Richards (2008, pp. 474-478) states that Bronn was close to ‘*Naturphilosophie*’, Gliboff (2008) presents him as an independent naturalist with many critics towards that school of thought.

¹³ Letter 5269, from Victor Carus to Charles Darwin, 7 November 1866. Available at: <https://www.darwinproject.ac.uk/letter/?docId=letters/DCP-LETT-5269.xml>. (Accessed: 6 Mar 2024).

Ernst Heinrich Philipp August Haeckel read Bronn's translation almost as soon as it was published and shortly afterwards started applying Darwin's ideas to the invertebrates he had been studying in the last decades. He went on to give open lectures on the subject to a broad but learned audience, and in these first communications, Bronn's presence could still be felt strongly. At this time Haeckel agreed with Bronn in taking evolution as a necessary, determined but not predictable, process explained by different superimposed natural laws. In his notebook, Haeckel paraphrased laws of unity of type and conditions of existence elevated to '*Grundgesetzen*' [fundamental laws] by Bronn. Besides that, Haeckel's use of the term '*Mannigfaltigkeit*' [diversity, variety] also brought him closer to traditional German morphologists, suggesting that he might have been looking for solutions to old problems designated by old terms, but now under a Darwinian perspective (Gliboff, 2008, pp. 159, 164-166, 173, 176).

Nevertheless, it would be erroneous to state that Haeckel was just a tributary of Bronn. Already in these first lectures, although not completely satisfied with Darwin's explanation of variation, Haeckel diminished Bronn's complaints regarding the origin of life and showed the peculiarities that would distinguish his take on Darwinism: a strong opposition between traditional religion and science, and a direct employment of transformism¹⁴ and progress to humankind (Gliboff, 2008, pp. 159, 170).

In the following years, Bronn's influence would wane as Haeckel developed his ideas (especially regarding 'Materialism' and 'Monism').¹⁵ In his *Generelle Morphologie* (published in 1866), trying to answer Bronn's critics, Haeckel attributed the origin of life to physicochemical reactions and resolved the problem of varieties by tying variation to environmental variations kept in check by conservative inheritance. '*Anpassung*' [adaptation] remained as a Bronnian '*Grundgesetz*' but with the sense of contingent positive variations instead of the necessary elimination of the ill-adapted. In fact, it was characteristic of Haeckel to use Bronn's terms with new Darwinist meanings (he did the same with '*Entwicklung*' [development] disambiguating it into '*Phylogenie*' and '*Ontogenie*')¹⁶ (Gliboff, 2008, pp. 173-177). Haeckel's recapitulationism, usually exemplified by the phrase 'ontogeny recapitulates phylogeny', can also be interpreted as a rapprochement to Bronn, since it devised a way of reconstructing the evolutive history of organisms through their embryology, thus partially supplanting the need for fossil evidence to sustain Darwin's theory as a system of necessary laws as Bronn required (Gliboff, 2008, p. 180). Lastly, both shared the same understanding of progress as measured by the degree

¹⁴ Transformism designates the set of ideas regarding the transformation of species. It includes but is not restricted to Darwin's ideas and its developments.

¹⁵ Both Haeckel and Büchner, who will be addressed below, followed Materialism as a philosophy, that is, they defended and developed ideas against phenomena that could not be directly explained by physical processes. Monism, as defended by Haeckel, encompassed Materialism since it stood for a single explanation for reality in opposition to a dualist explanation. Body and soul, for example, would have to be explained by the same principles.

¹⁶ Following Haeckel's (1874, pp. 9-10) definition, '*Phylogenie*' is the evolutionary history of a species while '*Ontogenie*' is the growth and development of a single organism.

of division of physiological labour and, consequently, morphological specialization (Gliboff, 2008, pp. 184-186; Richards, 2008, p. 147).

By 1867 Haeckel meant to translate his book into English. However, obstacles ranging from technical aspects to commercial failure prevented this from happening (Richards, 2008, p. 165) prompting Haeckel to produce a new book aimed at a broader audience. Between 1867 and 1868, Haeckel gave a series of twenty-four lectures derived from the *Generelle Morphologie*. These popular communications were then gathered to develop a new book, the *Natürliche Schöpfungsgeschichte* [*Natural History of Creation*] published in 1868. Here, Haeckel systematized biology according to Darwinian theory advancing new ideas where Darwin was lacking. Keeping the tendency of departing from Bronn, Haeckel mentioned him very few times throughout the book and did not list him as one of the first theorists on species change (Haeckel, 1874, pp. 245-246, 253, 283). This may be due to the new broad public now being addressed, which did not need to be convinced to abandon traditional morphological views. The book met with huge worldwide commercial success, eventually earning fame as the world's source on Darwinism (Richards, 2008, pp. 222; Hopwood, 2015, p. 66). This was read in Brazil by Miranda Azevedo, most likely through the French translation by sociologist and anthropologist Charles Jean Marie Letourneau¹⁷ (Haeckel, 1874).

Bronn's ideas were also translated in Friedrich Karl Christian Ludwig Büchner's popularizations. Büchner was, like Haeckel, a well-known representative of the new German thinkers who heavily criticized, often in polemical ways, their traditionalist peers related to '*Naturphilosophie*'. He quickly incorporated Darwin's ideas into his own radical political-philosophical program, which identified with Materialism and non-Marxist Socialism and soon became one of the most influential German Darwinists both nationally and internationally (Montgomery, 1988; Weikart, 1998; Engels and Glick, 2008). In 1868, he published his *Sechs Vorlesungen über die Darwin'sche Theorie* [*Six Lectures on Darwinist Theory*] collecting the text of some of the open lectures he had given before, most likely read by Miranda Azevedo in Auguste Jacquot's French translation (Büchner, 1869). Haeckel and Büchner read and cited each other frequently (Büchner, 1869, p. 25; Haeckel, 1874, pp. 98, 571, 589), and Büchner was also a reader of Bronn's translation of the *Origin*.

Bronn is first cited in a criticism regarding his translation of 'selection' as '*Züchtung*' which Büchner found too teleological. He preferred '*Auswahl*' because, in his view, "*dans la pensée de Darwin, la nature n'amende pas (züchtet nicht) comme l'homme peut faire, simplement elle élimine, elle sélige (wahlt aus), mais sans parti ou dessein*" (Büchner, 1869, p. 27). Later, Büchner (1869, pp. 65-67) agrees with Bronn's criticism of Darwin for turning to a "miraculous" origin of the first type or types. This was a breach in Darwin's thinking for it opened the question: if a special act of creation was necessary for the first beings, why wouldn't it be the case for all other ones? Moreover, Büchner (1869, pp. 66-67) asks, why

¹⁷ Letourneau's (an acting anthropologist) translation most likely added a new layer of translationality (and the same is probably true for Jacquot's translation of Büchner into French discussed ahead). However, a look into this episode of translation is outside the scope of this paper.

even bother to search for a natural explanation after a miracle? It was, then, paramount to extend Darwin's ideas to the origin of life like Bronn had said.

Thus, Büchner used Bronn's rapprochement of embryonic evolution and species evolution to discuss the origin of the first primitive unicellular organisms, which would resemble the germinative cells of ontological development. In other words, Büchner based his ideas on Haeckel's reply to Bronn's criticisms of Darwin (Gliboff, 2008, pp. 159, 170, 173-177; Haeckel, 1874, chapter XIII).

Until now, we have seen a chain of translationality going from Darwin to Bronn and then to Haeckel and Büchner in a variety of interepistemic translations. First, there is an interplay of interlingual and interepistemic translation in the case of Bronn's translation of the *Origin of Species*. The difference in Darwin's and Bronn's worldviews manifested itself not only in an overt criticism by the translator in various peritexts (independent review, translator's notes, and translator's preface) but also in the very terminology of the target text. Haeckel and Büchner received Darwin's ideas through Bronn's coloured lens which, as we have seen, influenced their own developments regarding Darwinism. Haeckel's and Büchner's texts were then popularized in a series of public lectures in another instance of interepistemic translation. Shortly after, these were compiled into new books: Haeckel's *Natürliche Schöpfungsgeschichte* and Büchner's *Sechs Vorlesugen* which were very successful and widespread worldwide.

All three authors were active participants in an ongoing dispute. On one side there was German transcendental morphology or *Naturphilosophie* and the old intellectual and social institutions to which it belonged, while on the other side, there was a new generation of naturalists wanting to break free from traditionalism and embrace Darwin's ideas regarding the natural world. Reaching and convincing as many people as possible was, thus, not only a scientific project but a political one as well. Therefore, translationality continued as Bronn's translation helped to fuel a new paradigm in German science that did not restrict itself to Darwin's original ideas but developed its own aspects of thinking. Haeckel was an acting naturalist while Büchner was an active philosopher, and both advanced their own ideas in their popularizations, putting forward notions such as a strong opposition between science and religion, a 'Lamarckian' emphasis on environmental effects, and a direct application of Darwin's theory to humankind. A few of their more particular ideas will be discussed as they find their way into Miranda Azevedo's Brazilian popularizations.

Both Haeckel's and Büchner's aspirations paid off, since their popularizations achieved market success, eventually overshadowing Darwin himself in transporting Darwinism across the world. Haeckel's writings were widespread in Brazil (Gualtieri, 2009) and Büchner's did not lag much behind. Both of them were read, most likely in French translation, by the young Augusto César de Miranda Azevedo before he graduated as a M.D. in 1874. His writings, echoing Darwin, Bronn, Haeckel, and Büchner, are the last link in the translationality chain to be presented in this paper.

Haeckel was extensively mentioned in Miranda Azevedo's M.D. dissertation, which was also structured using an order that resembles the one seen in the *Natürliche*

Schöpfungsgeschichte. His conclusion there, “*o aperfeiçoamento, pois, cada vez mais completo das espécies até o homem é uma verdade posta em evidência pelo Darwinismo*” (Miranda Azevedo, 1875, *Proposições – Ciências acessórias*, p. 3), also echoes Haeckel’s understanding of human evolution.

In his popularizations, Miranda Azevedo quoted and paraphrased Haeckel extensively (Haeckel, 1874, pp. 2, 4; Miranda Azevedo, 1876, pp. 41, 43). Miranda Azevedo’s historical account of the idea of evolution since Antiquity follows Haeckel’s historical chapters and also presents a strong opposition between science and religion, anticipating critics by mentioning Haeckel’s distinction of natural and moral materialism, a counterpoint to the moral decline thesis in a godless society advanced by religious groups (Haeckel, 1874, pp. 8-9, 34-35; Miranda Azevedo, 1876, p. 42). Even his definition of natural selection focusing on the struggle for life and elimination of the ill-adapted species seems to be calqued from Haeckel (Haeckel, 1874, pp. 119-120, 143; Miranda Azevedo, 1876, pp. 58-59). Miranda Azevedo also discussed “military selection” (the lack of suitable men for procreation due to war drafts), one of the social selection processes devised by Haeckel and which he believed had pernicious consequences for humankind, weakening its offspring rather than improving it (Haeckel, 1874, p. 153; Miranda Azevedo 1876, pp. 60-61).

Büchner, too, is nominally present in Miranda Azevedo’s dissertation (Miranda Azevedo, 1875, *Proposições – Ciências Acessórias*, p. 1). In his 1875 lecture, the most flagrant mark that can be traced to Büchner is a didactic presentation of Darwinism in four main interconnected points: 1) the struggle for life; 2) variation; 3) inheritance; and 4) natural selection (Büchner, 1869, pp. 699-702). This straightforward explanation restricted to what Darwin presented in the *Origin*, rather than Haeckel’s (1874, pp. 699-702) broad schematization in ten laws covering physiological and ecological aspects, was Miranda Azevedo’s choice for a rhetorical structure both in his dissertation and in his popularization. In fact, while discussing the first point, the Brazilian physician went as far as to cite Büchner directly (Miranda Azevedo, 1875, *Proposições – Ciências Acessórias*, p. 3; 1876, pp. 43, 57).

As stated before, Haeckel and Büchner were contemporary scholars that, as intellectual reformers opposed to German romanticism, were broadly on the same side, and who discussed the same subject (Darwinism) having read the same source text (Bronn’s translation of the *Origin*) while citing each other. Thus, it is no surprise to find elements in Miranda Azevedo that can be traced to both. His discussion, for example, of the stability of species opposing a teleological and a Darwinian school of thought culminating in the idea of “similar things producing similar things,” meaning the nature of organisms of giving birth not to exact copies of themselves, but to slightly varied individuals, can be found in both (Büchner, 1869, p. 37; Haeckel, 1874, p. 141; Miranda Azevedo, 1876, pp. 57-58).

Now, bearing in mind the impact of Bronn on Haeckel and Büchner, it would be difficult for Miranda Azevedo to avoid echoing him. Thus, Bronn survives most noticeably in Miranda Azevedo through a reliance on “laws” of nature (Miranda Azevedo, 1876, p. 57-58), resembling the ‘*Wissenschaft*’ approach Bronn followed, and also in the discussion of

the origin of life in his fifth lecture,¹⁸ one of Bronn's major criticisms regarding the *Origin* now answered by Haeckel.

5. Concluding Remarks

The chain of translationality presented in this paper can be summarized in the following diagram:

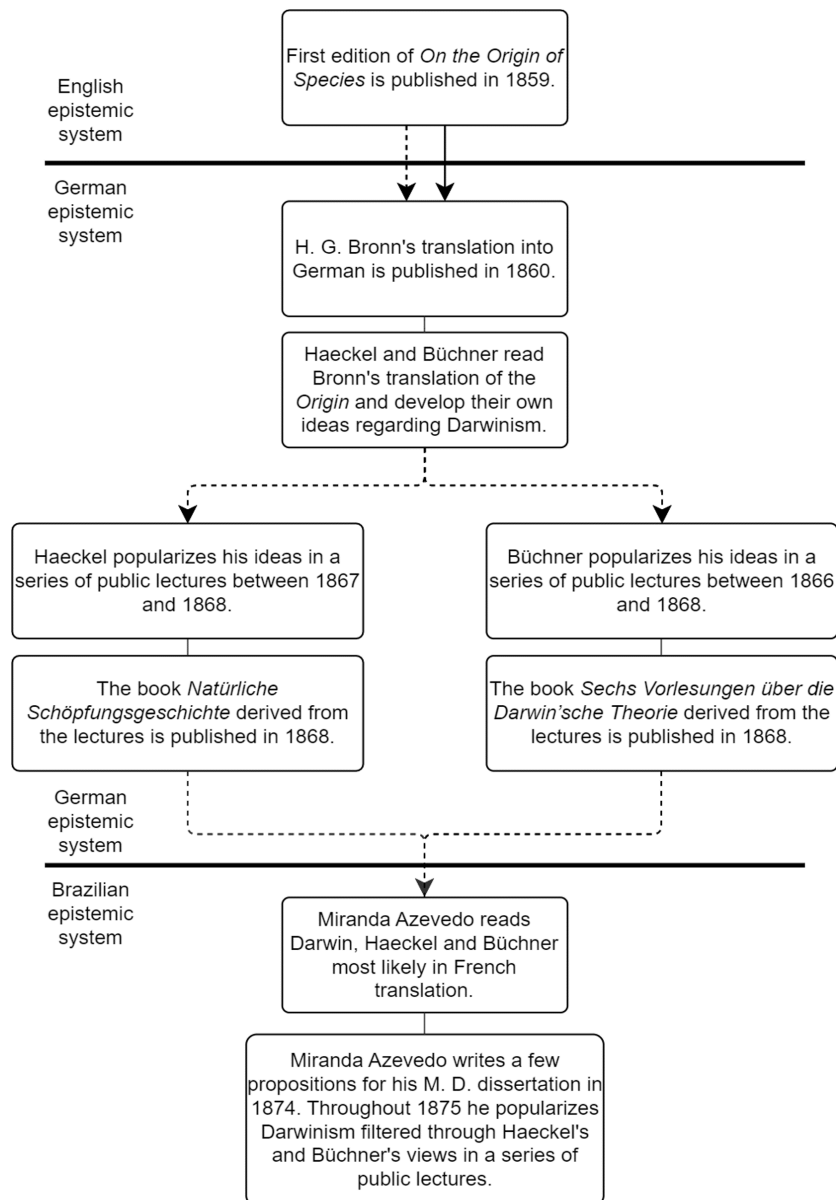


Figure 1. Flowchart of Darwin's reception in Brazil as a translational process. Dashed arrows represent cases of interepistemic translation while the continuous arrow represents a case of interlingual translation. The thick horizontal lines represent the "frontiers" of national epistemic systems.

¹⁸ *Jornal do Commercio*, 18 May 1875, n. 137, p. 3. Available at: https://memoria.bn.br/DocReader/docreader.aspx?bib=364568_06&pasta=ano%20187&pesq=&pagfis=11073 (Accessed: 6 Mar 2024).

That is to say, in 1859, Darwin published the *Origin of Species* (itself an abstract of a larger unpublished work) which was then translated into German by Bronn in 1860 with comments and adaptations according to his particular view of science embedded in the German context ('*Wissenschaft*'). In the first half of the 1860s Haeckel read Bronn's translation and, as a practicing naturalist, advanced Darwinism scientifically by adding his own theoretical contributions; he was also one of the most active participants in the sharply polarized debate between German intellectuals at the time (it must be remembered, then, that even inside the German epistemic system there were two different generational epistemic systems). Haeckel popularized his ideas orally in public lectures between 1867 and 1868 which were worked into a new book published in 1868. At roughly the same time, Büchner read Bronn's translation and developed his own philosophical ideas regarding Darwinism, coopting it to his own philosophical-political purposes as a materialist and socialist. Between 1866 and 1868, Büchner popularized his ideas orally in public lectures, also publishing a book out of them in 1868. Both Haeckel and Büchner acquired national and international success, becoming almost synonymous with Darwin. In Brazil, Miranda Azevedo read Darwin (presumably), Haeckel, and Büchner most likely in French translation. First, he wrote a few propositions in his M. D. dissertation presented in 1874 based on these ideas. Finally, throughout the year of 1875, he popularized them orally in public lectures as part of political effort in educating the public for the new scientifically enlightened times in which they were living, surely hoping that it would fuel changes in Brazil's socio-political make-up.

Thus, Darwin's ideas suffered a series of transformations at each step until they reached the Brazilian public. First, they were thoroughly criticized by Bronn in his translation of the *Origin*, and his ideas regarding the very constitution of science directly informed his translation choices. Bronn followed his ideals of '*Wissenschaft*' pursuing a holistic, nomothetic, and inductive science which, according to him, Darwin did not always meet, thus, motivating his criticisms regarding the lack of an origin of life and his translations of Darwin's terminology to cater to German naturalists. These points survived, as in Benjamin's ([1923] 1997) afterlife ['*Fortleben*'], although once again transformed, in Haeckel's and Büchner's works and popularizations. Moreover, Haeckel and Büchner were acting participants in a very heated debate against traditionalists, also motivating their engagement with Darwin's ideas. These takes, in turn, survived in Miranda Azevedo's popularization, transformed one more time according to Brazil's socio-political situation on the eve of the proclamation of the Republic. Thus, Darwin's ideas went through at least two major interepistemic translations (or perhaps an indirect interepistemic translation) in this case, first between the transportation from Darwin's English views to the German epistemic context and then between it and the Brazilian epistemic context (notwithstanding, of course, the various reformulations and popularizations along the way).

Turning to the discussion regarding SP and its nature in a *continuum* of discourses of which 'proper science' is also a part of, we conclude that a translational aspect was present

in Miranda Azevedo's life and work, including, of course, his role as a Darwinism popularizer in Brazil. His role as popularizer was not that of a relay station that transmits an exact copy of a received message, a 'clone' to use Robinson's (2017) terms. He had agency in the choice of which ideas to keep in a short lecture, which sources to use, and also how to contextualize them for his public, which was also an active agent in this process, since Miranda Azevedo was trying to educate it to follow new repertoires, to use Alonso's (2002) term.

In conclusion, this paper has argued that the concepts of translationality and interepistemic translation are useful tools for understanding how to follow knowledge that keeps changing over time. Beyond that, in line with Secord's (2004) call for understanding science as communication, these concepts may illuminate not only the act of science popularization but also the very history of science and the study of circulation and reception of ideas.

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INTELLIGENT DESIGN IN ARABIC: FROM SCIENTIFIC KNOWLEDGE TO RELIGIOUS WORLDVIEWS

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ABSTRACT: While modern science adopts an evolutionary worldview in the study of life on earth, competing religious systems adopt variations of the creationist worldview in line with their respective brands of culturally embedded knowledge. Nonetheless, these religious systems inevitably interact with science in order to exchange information and interpretations. This paper views the knowledge exchange between science and religion as a form of epistemic translation that involves reframing biological evolution through adaptation and transformation. First, the claims of the creation science and intelligent design movements in the United States are conceptualised as translations of the scientific knowledge produced in evolutionary biology. Afterwards, paratexts accompanying the earliest translations of intelligent design literature into Arabic are analysed to reveal how this conservative Christian literature is adapted to a Muslim context. Epistemic translation arises in both cases as a factor influencing dynamic discourses sensitive to knowledge transfer from other epistemic systems.

KEYWORDS: Epistemic Translation, Intelligent Design, Science and Religion, Islamic Creationism, Paratextual Analysis

1. Introduction

This article traces a case in which scientific knowledge is transferred from science to religion. The scientific knowledge in this case is produced in the discipline of evolutionary biology, then adapted as pseudoscience by Christian movements in the United States, before the adapted pseudoscience finally reaches readers of Arabic through translation after further adaptation by Islamic organisations. In order to facilitate the study of this instance of knowledge transfer, science and religion(s) are depicted as epistemic systems concerned with different types of knowledge in line with their different purposes and worldviews. Understanding the motion of knowledge between these systems requires translational processes capable of addressing the differences between knowledge systems. Robinson (2017, p. 200) suggests “interepistemic translation” as a label for the translation between epistemic systems, a process that involves the adaptation and transformation of knowledge as it is reframed in another epistemic system. Bennett (2024, p. 2), changing the label slightly to “epistemic translation”, predicts that the examination of transformations taking place while translating from one epistemic system to another may reveal the cultural frameworks and semiotic mechanisms involved. (Inter-)epistemic translation is, therefore, a concept that facilitates understanding the recontextualisation of knowledge in transit and the factors influencing this process.

Unpacking the adaptation and transformation aspects of epistemic translation, the article traces how scientific knowledge pertaining to biological evolution is utilized directly by conservative Christians in the United States and indirectly by conservative Muslims in

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the Arab world. The article shows how biological evolution is transformed into antievolutionary rhetoric by the creation science and intelligent design movements in the United States to serve their religious purposes, and then how intelligent design is 'Islamicized' in publishers' paratexts when translated into Arabic for Muslim consumption. In both cases, the translation process is arguably shaping and being shaped by dynamic discourses of science and religion in the United States and the Arab world.

The paratext is proposed in this article as an adequate site for the study of epistemic translation. Batchelor (2018, p. 142) defines a paratext as "a consciously crafted threshold for a text which has the potential to influence the way(s) in which the text is received". In other words, paratexts are elements shaping how a text is read in a given context (Genette, 1991, p. 266). Paratexts, particularly those accompanying the text, are sites where the agents involved in the production of the text are liable to reveal their intentions. In the case of translation, Batchelor (2018, p. 25) suggests that these paratexts are where "adaptation of the text to its new environment" is commonly declared, explained and justified. Hermans (2014, p. 33) adds that the agent(s) involved in translation may avail themselves of these paratexts to "signal their agenda", which may or may not conform to that of the author(s). Moreover, paratexts are not only influenced by their new context, but also capable of exerting their own influence on it (Batchelor, 2018, pp. 170–171). Paratextual analysis is thus capable of bringing to light the transformations and adaptations involved in epistemic translation and the motives behind them.

In the next section, science and religion are conceptualised as systems producing knowledge of a different nature using different means. Although both systems are epistemically diverse, science is united by the application of methodological materialism while religions have in common an appeal to the supernatural. Section 3 interprets the increasing reliance of creationist movements in the United States on scientific knowledge as a form of epistemic translation where science is transformed into pseudoscience. Section 4 analyses paratexts of the earliest Arabic translations of intelligent design (the most recent American creationist movement) to answer why this body of literature attracted Islamic organizations and how the discourse was adapted to make translation possible. Finally, the article concludes by illustrating the theoretical value of epistemic translation to the understanding of communication between the discourses of science and religion.

2. Science and religion as epistemic systems

Modern science as an epistemic system is relatively coherent. Modern science is broadly concerned with "the testing of explanations of the natural world against nature itself" (Scott, 2009, p. 3). Put another way, it is concerned with inquiry into aspects of the world using empirical methods (Bennett, 2023, p. 445). What sets modern science apart from other approaches to knowledge is the adherence to methodological materialism, also known as methodological naturalism, according to which explanations of natural phenomena are restricted to natural causes (Scott, 1997, p. 272). Nonetheless, it should be

noted that modern science under methodological materialism is still epistemically diverse. Depending on the state of research within a discipline, scientific research may accumulate based on past scientific achievements as normal science or offer novel ways to view nature leading to a new paradigm (Kuhn, 2012). The episteme of normal science, where scientific research is carried out within an established paradigm, is relatively conservative compared to the more open-minded research that leads to a new paradigm (Robinson, 2017, p. 100). Having said that, paradigm-establishing revolutionary science is still dependent on normal science, which means the two epistemes can be difficult to demarcate (Casadevall and Fang, 2016). Furthermore, there are social and cultural understandings of modern science, such as the understanding of science as practice (Olohan, 2018), that challenge the conception of science as singular or unitary. According to such understandings, different branches of science and different scientific institutions may have different 'epistemic cultures' under which knowledge construction is influenced by the frameworks in place (ibid., 2018, p. 504). Although modern science as a knowledge system is relatively coherent due to its adherence to methodological materialism, it can still be divided into smaller epistemic systems in various ways.

Religion, on the other hand, is a less coherent epistemic system compared to modern science. While the varieties of modern science arguably have commensurable worldviews, religions espouse different worldviews that are often incommensurable. As religions often adhere to competing worldviews, dialogue between them usually takes the form of polemics. Nonetheless, they seem to have in common "a belief in something beyond the material world" (Scott, 2009, p. 53). Bennett (2023, p. 445) situates religious knowledge among "Science's Others" as a kind of understanding that is "culturally embedded, embodied or performative" in which meaning is susceptible to linguistic and cultural influences. These influences encourage adherents of various religions to claim that their sacred texts, and the religious knowledge they hold, are untranslatable due to the divine nature of the language in which these texts are written (Israel, 2023, p. 7). The cultural embeddedness of religious knowledge is seen, for example, in a wide range of beliefs explaining the origin of the natural world by supernatural means. Creationism, broadly understood as "creation by a supernatural force" (Scott, 2009, p. 57), is an umbrella term for these beliefs. But since explanations of the natural world fall within the domain of science, creationist beliefs inevitably intersect with scientific knowledge. This is where translational processes between science and religion may take place.

3.From evolutionary biology to American creationism

Biological evolution is the current scientific explanation for the origin and diversity of life on Earth. Biological evolution refers to a process that causes "inherited change in the properties of groups of organisms over the course of generations" (Futuyma and Kirkpatrick, 2017, p. 7). It is an open-ended, unpredictable process that results in adaptation to the environment (Bowler, 2009, p. 10). This kind of adaptation happens gradually through natural selection, a mechanism postulating that individuals with

favourable characteristics have better chances of survival and leave behind more offspring inheriting their characteristics (Futuyma and Kirkpatrick, 2017, p. 60).

Biological evolution is the object of study of evolutionary biology, a discipline that aims to explain the ultimate causes of biological phenomena by studying the history of biological diversity (Futuyma and Kirkpatrick, 2017, pp. 6-7). The discipline emerged when the biological sciences in general were undergoing a movement of unification in the wake of what is usually called the evolutionary synthesis or the modern synthesis (Smocovitis, 1992, p. 3). An extended evolutionary synthesis is proposed in contemporary evolutionary biology to account for an ecological-developmental perspective that requires a new conceptual framework (Laland et al., 2015), although this proposal has been criticized as unnecessary and even “affected by extrascientific values” (Futuyma, 2017, p. 9). The debate on the extended evolutionary synthesis is a debate on the significance of developmental processes to evolutionary explanations, not on the validity of these explanations (Baedke, Fábregas-Tejeda and Vergara-Silva, 2020). Evolution, therefore, remains “the consensus view of the scientific community” (Scott, 2009, p. 165).

Although the concept of biological evolution is firmly established as one of the cornerstones of modern science, the idea of evolution is doubted or even denied for religious and other reasons (Futuyma and Kirkpatrick, 2017, p. 577) and is capable of provoking public controversies in various cultures around the world (Thompson and Walsh, 2014, p. 3). Nonetheless, Scott (2009, p. 63) notes that apart from small movements in Islamic countries and Israel, antievolutionism is rooted in conservative Christianity in North America, particularly in the United States. Scott (1997) places this religious brand of evolution denial along a continuum of positions ranging from special creationism to deism, depending on how literally the Bible is interpreted and how much of modern science is accepted. The more conservative views embrace young-earth creationism, the belief that the earth was created by God around 6,000 to 10,000 years ago. Less conservative views embracing old-earth creationism accept the idea of an ancient earth as established in modern science while rejecting aspects of modern evolutionary theory. Around the turn of the 21st century, American antievolutionist discourse was starting to gain global exposure through translation and other means of communication (Numbers, 2006, pp. 399-401). The particular nature of this discourse that arises in an American Christian context raises questions of adaptation when translated into other contexts.

Around the early 1960s, evolution denial in the United States started to shift from a dogmatic to an epistemic rejection of evolution. Scott (1997, p. 268; see also 2009, p. 68) sees this shift as marked by the 1961 publication of *The Genesis Flood*, a book that influenced fundamentalist Christians to argue that evolution is “not only religiously objectionable but also scientifically flawed”. The shift resulted in what came to be called creation science, a movement that adopts young-earth creationism in its blending of theology and science. But rather than providing scientific evidence for creation and a young earth, creation science literature is predominantly directed toward finding flaws in the evolutionary worldview (Scott, 2009, pp. 106-107). This epistemic shift inevitably required

more engagement with science, and therefore more need of translating scientific knowledge epistemically in order to achieve the aims of creation science. For example, creation science relies on transforming uncontextualized data pulled from scientific literature, such as research on the Cambrian explosion, into evidence against evolution. Creation science also adapted the distinction between microevolution and macroevolution in evolutionary biology into ‘horizontal’ and ‘vertical’ change in its rejection of speciation. Consequently, the nature of the claims against evolution resulting from this translation process requires more engagement from scientists with specialized knowledge in order to refute it (Scott, 1997).

The rise of creation science in the United States triggered a wave of Arabic publications in the 1980s that adapted the tendency towards an epistemic rejection of evolution for an Islamic context. The influence of creation science on these publications is evident in the arguments they advanced as well as in the works they cited, although it seems that none of the works of creation science literature were translated into Arabic (Shavit, 2015). The lack of interlingual translation of these works is likely due to the insistence of creation science on a young earth worldview in line with a literal interpretation of the Bible. Conservative Christian and Islamic narratives of creation diverge in relation to the age of the earth because, unlike the Bible, the Qur’an does not postulate a young earth (Malik, 2021, p. 100). The age of the earth even informs a popular Muslim critique of the Bible in Muslim-Christian polemics (Kojonen, 2023, pp. 667-668). Although creation science was translated epistemically into an Islamic context, the epistemic divide was perhaps too wide for interlingual translation to take place.

Around the late 1980s, the failure of the proponents of creation science to convince American courts of its scientific status channelled antievolutionist efforts into a more sophisticated scientific alternative to evolution in the form of intelligent design (Scott, 1997; 2009). Unlike creation science, the intelligent design movement predominantly accepts an ancient earth in accordance with modern geology, although there are some exceptions (Scott, 2009, p. 133). Most intelligent design proponents insist on the insignificance of specifying a natural or supernatural agent responsible for the design in order to avoid the religious implications of a supernatural intelligent designer, again with some exceptions (Sober, 2007). Intelligent design literature is generally considered more scholarly in its focus on “areas in evolutionary theory that are not yet well understood” (Scott, 1997, p. 280), although it rarely offers empirical studies and, instead, settles for commenting on the research of evolutionary biologists (Scott, 2009, p. 132). The closer engagement of intelligent design with evolutionary biology requires more sophisticated translational processes in order to adapt scientific knowledge into a creationist worldview. An example of this adaptation is Behe’s (2006) portrayal of biochemical structures, such as the bacterial flagellum and the blood clotting cascade, as irreducibly complex structures that cannot be explained through evolutionary processes. By introducing the concept of irreducible complexity, Behe translated competing evolutionary explanations of complex biochemical phenomena into transcendental design for the purpose of introducing an

intelligent designer responsible for these phenomena. Even though the religious motivations of intelligent design are still discernible, they are promulgated under a more scientific guise.

Despite the conservative Christian roots of the intelligent design movement, its proponents are more pronounced in their claim to science. This is not to say intelligent design claims to operate under methodological materialism, but that proponents of intelligent design demand that science should be radically changed in order to accommodate the possibility of intelligent intervention in explanations of origins (Scott, 2009, p. 130). As such, intelligent design is depicted as a revolutionary scientific paradigm rivalling materialism (Numbers, 2006, pp. 379-383). The argument for bestowing a scientific status on intelligent design by extending science beyond the boundaries of methodological materialism rests on claims such as the presumed fruitfulness of design arguments in biology and the possibility of missing deliberate design if it actually occurs in nature because of its having been ruled out methodologically (Ratzsch, 2010). On the other hand, intelligent design is considered non-scientific or pseudoscientific because, as a reincarnation of the argument from design, it cannot be tested by observation and experiment (Ayala, 2010) and fails to provide substantive claims that are free from theological implications (Sarkar, 2011).

4. Islamicizing intelligent design

In the 2010s, the rise of intelligent design in the United States started to attract the attention of Muslim antievolutionists in Arab countries, resulting in another wave of Arabic publications adapting this new reincarnation of American creationism into an Islamic context. Obiedat (2022) places this wave of publications in the context of an Islamic reaction to a resurgence of atheism in the Arab world. But unlike the 1980s wave of creation science adaptation analysed in Shavit (2015), this wave of publications includes numerous interlingual translations of American creationist literature promulgating intelligent design. Although the adaptation of intelligent design discourse into an Islamic context is still fraught with epistemic difficulties, the narrower epistemic divide between intelligent design and Islamic creationism as compared to creation science seems to have made it possible for interlingual translation into Arabic to materialise. This section captures the nuances of reframing intelligent design in the earliest Arabic translations by means of an analysis of the paratexts accompanying these translations.

4.1 The advent of intelligent design to Arabic discourse

The interest of Islamic organizations in the intelligent design movement became evident in 2014 when the first book-length translations of intelligent design texts appeared in Arabic. The initial phase of the Arabic translations of intelligent design literature consists of four translations published simultaneously by the same Islamic publishers. These are the translations of *Icons of Evolution: Science or Myth? Why Much of What We Teach about Evolution is Wrong* by Jonathan Wells (2002, first published 2000), *The Design of Life:*

Discovering Signs of Intelligence in Biological Systems by William A. Dembski and Jonathan Wells (2008, a sequel to the 1989 creationist textbook *Of Pandas and People*), *Darwin's Black Box: The Biochemical Challenge to Evolution* by Michael J. Behe (2006, first published 1996) and *Science and Human Origins* by Ann Gauger, Douglas Axe and Casey Luskin (2012). The last book is the only one published directly by Discovery Institute, the conservative think tank acting as the hub of the intelligent design movement in the United States (Scott, 2009, p. 131). However, Wells, Dembski and Behe, the authors of the other three books, have been closely associated with the think tank since 1996 when they were appointed as research fellows in Discovery Institute's Center for the Renewal of Science and Culture (Numbers, 2006, pp. 382-383).

The four translations were published in Egypt by Elkateb for Publishing and Distribution, with Braheen Center for Research and Studies, an organization based in the United Kingdom, credited as co-publisher. According to Obiedat (2022, p. 3), Braheen is a think tank funded by civil societies based in the Arabian Gulf region with the express purpose of countering atheism. New impressions of the first edition of these translations were released almost immediately with new covers listing Takween for Studies and Research (another organization based in the United Kingdom) as an additional co-publisher. Both sets of impressions carry the same publication date, December 2014, and introduce the translations as the first edition. But out of the three publishers involved, it seems that Braheen was the agent responsible for selection and translation. In both impressions, paratexts introducing these translations to Arabic readers feature only individuals affiliated with Braheen, while Takween is acknowledged as a sponsor of the new impressions, and Elkateb (the publisher holding the translation copyrights and handling the registration and printing of both sets of impressions in Egypt) is absent beyond the covers and copyright pages.

Both Braheen and Takween were keen to introduce themselves to their target audience by means of page-long descriptions located at the end of the four translations, immediately before the back covers. In these paratexts, Braheen describes itself as an independent research centre specializing in the study of atheism and the analysis of belief crises. It has a vision of '*ālam bilā ilhād*'¹ (a world without atheism) and aims to pursue this vision through the deconstruction of atheist discourse in accordance with Islamic scriptures and the fundamentals of Islamic law. In contrast, Takween offers a more specific premise and narrower scope for its operations. The organization describes itself as a research centre whose aim is the production of contemporary intellectual discourse representing the Sunni Muslim way of thinking. It plans to achieve this aim through the production of revelation-abiding intellectual works, the development of scientific potential, the monitoring of current debates and the criticism of intellectual deviations. Although both organizations adopt an explicit Islamic agenda, Braheen sounds more confrontational in its approach.

¹ All transliterations of names and phrases from Arabic follow the American Library Association – Library of Congress (ALA-LC) romanization standards.

Braheen was keen on situating the translations in their new context using publisher paratexts. Each of the four translations features an introductory paratext written by 'Abd Allāh ibn Sa'īd al-Shihri (the head of Braheen at the time of publication) to justify why each respective source text was selected for translation. Al-Shihri's introductions are generally promoting intelligent design as an understanding of life's origins that can bring Islam closer to science, although at this initial phase he is also critical of intelligent design from an Islamic perspective. Al-Shihri is also credited as a reviser of three of the four translations, marking his heavy involvement in the translation process. In addition to al-Shihri's introductions, three of the translations feature an additional introduction by Aḥmad Yaḥyá, who is introduced to readers as head of the biology research department and member of the scientific committee at Braheen.

The four books were translated by a total number of six acknowledged translators, with one translation (Behe, 2014) acknowledging unnamed translators in addition to a team of three named ones. Each book was translated by a team of at least two translators. The voice of the translators, introduced only by name, is noticeably missing from the paratexts. Except for their names, translators are mentioned only towards the end of each introductory paratext, where the translation teams are acknowledged collectively as experts in biology and appreciated for working under what is described as challenging circumstances and tight deadlines. The names of all translators are preceded by the Arabic equivalent of the designation 'Dr', but since they are only introduced by name in the paratexts, it is not clear what this designation signifies for each translator, bearing in mind that it is commonly used in Arabic not just for holders of a doctorate degree but also for medical practitioners such as physicians, dentists and pharmacists.

The publishers of the translations are quite specific about the audience they are targeting and their motives for targeting them. The identical text appearing on all the back covers of the translations speaks directly to the Arab Muslim reader. In the introduction to Wells (2014), al-Shihri describes in detail his perception of the needs of the Muslim individual that the translation aims to satisfy. In the introduction to Dembski and Wells (2014), al-Shihri states the motive for translating the text into Arabic as meeting the need of many researchers, seekers of knowledge and critics of atheist theses for authentic (as opposed to abridged or summarized) resources. Al-Shihri expresses a similar motive for Braheen in his introduction to Behe (2014), namely the provision of adequate scientific material to researchers interested in critiquing or evaluating the theory of evolution.

4.2 Intelligent design as science

Free from the religious connotations of intelligent design in the American context, the publishers of the Arabic translations aptly stressed the scientific status of the translated texts in their efforts to bolster the position of intelligent design in the new target context. The translations are introduced to Arabic readers as scientific works starting from the covers. Unlike the source publications, the names of the authors on three of the translations are preceded by the designation 'Dr'. Behe (2014) is even introduced by his full

title as professor of biochemistry at the University of Pennsylvania on the cover of the first impression. As mentioned above, the names of all the translators are also preceded by the same designation, most likely to highlight their competence to translate these 'scientific' works. The title of Yaḥyá as head of the biology research department, appearing under his name in the introductions, suggests that these are translations of biology texts.

The publishers' introductions also depict these works as scientific. In the two introductions by the translation's publisher to Gauger, Axe and Luskin (2014), al-Shihri in his introduction commends the authors as 'knowledgeable experts, not amateurs ignorant of the subject matter they are criticizing' while Yaḥyá describes them as 'an elite group of specialist scientists'. In the introduction to Behe (2014), al-Shihri stresses the importance of making what he describes as scientific materials available in Arabic to researchers interested in evolution theory. He also advises potential readers to brace themselves for he describes as specialized terminology familiar to experts in this branch of science for the sake of the 'scientific benefits' they are bound to gain by reading the translation. In the introduction to Dembski and Wells (2014), al-Shihri situates the translation as an example of the testimonies of specialists against evolution and stresses the importance of being aware of the debates taking place between scientists in scientific institutions.

But the science the publishers of the translations are targeting is intelligent design, introduced to the target audience as a viable scientific theory that rivals the Darwinian theory of evolution. The back covers of the four translations introduce the books as representative voices of the 'oppressed' proponents of intelligent design in their ongoing debate with 'Neo-Darwinists' over formulating the most plausible explanation for the origin and diversity of life. Yaḥyá, in his introduction to Behe (2014), hails the book as a reconstruction of the design argument, while al-Shihri offers a discussion of the concept of intelligent design supplemented with a definition translated from one of Behe's published articles. In addition to 'design' and 'intelligence' both featuring in the title of Dembski and Wells (2014), al-Shihri's introduction also offers a terminological critique of *al-taṣmīm al-dhakī*, the Arabic equivalent of intelligent design adopted by the publishers, from an Islamic perspective.

The insistence on intelligent design is most apparent in the translation of *Icons of Evolution* (Wells, 2014). The idea that the book is a voice of intelligent design is reiterated in al-Shihri's introduction. The translation of the author's biography from the source text features an added phrase stressing his status as "one of the most well-known theorists ... of the 'intelligent design' theory". But unlike the claims made in the translation paratexts, the source text does not deal with intelligent design in any meaningful way. Instead, Wells attempts to undermine evolution "without specifically mentioning intelligent design" (Scott, 2009, p. 139). In fact, intelligent design is mentioned in the source text only twice, in the context of a story about a high-school teacher being prevented from introducing the concept to his students (Wells, 2002, p. 238). This insistence on constructing the translated discourse around intelligent design regardless of its status in the source text suggests that

intelligent design is the focal point of the discourse as far as the publishers of the translations are concerned.

4.3 Epistemic qualms

In the introduction to Wells (2014), al-Shihri seems to anticipate heavy criticism from the conservative circles the translations are targeting for the initiative of translating intelligent design discourse. In order to allay these anticipated objections, he follows a strategy of justifying the position of Braheem while undermining expected counter-arguments. First, al-Shihri stresses that a policy of complete avoidance of certain strands of knowledge is neither practical nor realistic for Muslims in this age of information availability. Instead of avoidance, he suggests that one must actively influence knowledge by participating in its production in order to minimize being negatively influenced by it. Second, al-Shihri applies this inference to what he describes as the sensitive issue of evolutionary theory as an example of the intersection between science and religion. He then grounds the initiative of launching a series of translation projects addressing this issue within Braheem's efforts to equip Muslims with the necessary knowledge that would enable them to contribute to the debate. Third, al-Shihri defends Braheem's initiative from a religious perspective by stating that it neither transgresses nor opposes the objectives of Islamic law, citing the 14th century theologian Ibn Taymiyah to support the permissibility of reading the books of other nations and translating them into Arabic. He bolsters this defence with an attack on those who may think otherwise, describing them as weak in mind and short in sight. The detailed nature of these anticipatory arguments indicates that the translation of intelligent design discourse was a deliberate, albeit difficult, decision.

Although the translations are presented to potential readers as strictly scientific, the publishers were nonetheless aware of the theological context of the source texts. This point is pronounced more directly in al-Shihri's introduction to Dembski and Wells (2014), in which he draws the reader's attention to the direct influence of one's religious background and spiritual experience on their conceptualization of issues such as evolution. He then proceeds to enumerate aspects of the problematic nature of what he describes as the Judeo-Christian heritage in relation to evolution, including the conception of God and the creation narrative in scriptures. Later in the introduction, he raises some issues related to what he calls "*ihā'āt 'aqadīyah*" (dogmatic connotations) in the term 'intelligent design', which encourages him to suggest using the Sharia-compliant, Quran-inspired term "*al-ṣun' al-muṭqan*" (precise or perfect fabrication) as a solution to this problem. Although the term was not used in this translation and may not have been used anywhere else, this attempt to tailor the term for the new epistemic context signals awareness of the theological dimension of intelligent design discourse.

4.4 Impact of intelligent design on Islamic discourse

The publication of the four translations discussed above seems to have succeeded in establishing a position for intelligent design literature in the Arabic discourse of Islam and

science. Both Braheen and Takween continued publishing Arabic translations of intelligent design literature, as well as non-translated treatments of the same topic. Eventually, other Islamic organizations and publishers joined them in publishing both translations and non-translations. These include Tabsir Center for Publishing and Distribution, an Islamic publisher based in Egypt; Markaz al-Fikr al-Mu'āsir, an Islamic think tank based in Saudi Arabia; Rawasekh Center, an Islamic organization headquartered in Kuwait; and Imam Hussein Holy Shrine, one of the most prominent Shi'ite religious authorities in Iraq. The contributions of the latter organization in particular may have introduced a Sunni-Shi'ite splintering of the intelligent design discourse in Arabic. Imam Hussein Holy Shrine published four relevant translations in the period from 2017 to 2020. New translations of the same texts by different translators were subsequently published by the UK-based Sunni organization Takween under slightly different Arabic titles with no acknowledgment of the previous translations. An analysis of this set of translations and their retranslations may reveal fine-grained differences in evolution denial between Sunni and Shi'ite creationist discourses.

The adaptation of intelligent design to an Islamic context paved the way towards new religious discourses of biological evolution in Arabic. Shavit (2015) notes that the influence of creation science in the 1980s never resulted in Arab equivalents of creation science activists and that evolution denial in conservative Islamic circles remained socio-religiously inclined. The proliferation of translated and non-translated intelligent design publications in Arabic since 2014 suggests deeper engagement with knowledge produced in evolutionary biology and its pseudoscientific alternative.

The impact of the 'Islamicized' intelligent design is also noticeable in the academic discourse of texts published in Arabic since 2014. For example, 'Amrānī (2022) posits intelligent design as a full-fledged scientific theory rivalling the theory of evolution. But unlike most intelligent design literature, 'Amrānī is vocal on the divine plan of God, the intelligent designer. The Islamic studies article published in Algeria cites three of the four translations discussed above as well as other translated and non-translated creationist literature. The level of engagement with this body of literature in 'Amrānī's study is indicative of its wide influence in Arabic religious discourses.

5. Conclusion

Epistemic translation emerges in the analysis as a reflection of the increasing communication between epistemic systems. The birth of creation science took place when the dogmatic denial of evolution, a position that requires little interaction with science, was no longer serving the purposes of conservative Christians in the United States. As a pseudoscience, creation science selectively borrows information and concepts from evolutionary biology and other disciplines in order to justify a religious worldview based on scriptures. When creation science started to lose ground, a more sophisticated descendent that requires more communication with scientific knowledge appeared in the form of intelligent design. Although the Christian worldview of intelligent design is still intact, the

deeper interaction with scientific knowledge made its translation into a Muslim context a feasible endeavour. Nonetheless, the interlingual translation of intelligent design into Arabic was possible only through an adaptation process that requires increased communication between the Christian and Islamic brands of creationism. Epistemic translation is, thus, indicative of converging discourses in different epistemic systems.

The analysis suggests that epistemic translation is productive in the study of knowledge in motion between epistemic systems. As knowledge is recontextualised, epistemic translation is capable of revealing the mechanisms of the transformations and adaptations taking place, the state of the frameworks shaping the recontextualisation process, and how these frameworks are in turn affected by the assimilation of the translated knowledge. Perhaps epistemic translation may have a role in demarcating science against its pseudoscientific others, a problem that is more complicated than it may seem (Hirvonen and Karisto, 2022). In summary, ignoring translational processes taking place on the epistemic level may prove detrimental to the understanding of how and why knowledge exchanges hands in disparate discourses.

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TRANSLATION AGAINST EPISTEMICIDE THROUGH CONTEMPORARY ART

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ABSTRACT: This article focuses on the translation of non-Western knowledges. It aims to describe different types of translation which anthropologists have used to approach a kind of knowledge that is constructed not only with the intellect but also with more than five senses. Including the ideas of the so-called 'sensory anthropology', which, together with other types of translation in anthropology, such as 'shamanic translation', 'translation as equivocation', 'intercultural translation' and 'total translation', open the door to a new way of addressing and dealing with the translation of this knowledge. The article also shows how some contemporary translation theories can be combined with the sensory turn in anthropology to be able to translate a type of knowledge that from time immemorial has not been transmitted through the conventional channels of the Western world.

KEYWORDS: Indigenous Cultures; Knowledge; Translation

1. Introduction: against epistemicide

On so many occasions, translation practices have facilitated colonialism (Price, 2023). They have facilitated epistemicide. Some decades ago, the Portuguese sociologist Boaventura de Sousa Santos (2001; 2005; 2016) denounced the suppression and silencing of non-Western forms of knowledge by coining this term, 'epistemicide', which refers to how the indigenous knowledges of the Global South have been completely marginalized. 'Epistemicide' has to do with the suppression of other, non-scientific forms of knowledges (Santos, Nunes and Meneses, 2007, p. xix). It has far-reaching consequences because it "disempowered these societies, rendering them incapable of representing the world as their own in their own terms, and thus of considering the world as susceptible to being changed by their own power and for their own objectives" (Santos, 2018, p. 8).

Today, Karen Bennett (2007; 2004a; 2024b), Joshua Price (2023), Valerie Henitiuk (2024), Vicente Rafael (2024), Christina Korak and Rafael Schögler (2024) are some translation scholars who warn about epistemicide as a way of "denigrating, disappearing, ignoring, or discrediting knowledge produced by subaltern intelligentsia. Eurocentric scholarship, the Global North, and the West tend to sideline or disregard intellectuals from the Global South and undervalue their contributions. This amounts to epistemic marginalization" (Price, 2023, pp. 53, 74). As Price stated in his presentation at the Lisbon conference, translation can involve "theft (for example, intellectual extractivism, piracy, cultural appropriation, vampirization, Frankensteinization, and museumification)" and also "destruction (degrading, ridiculing, or simplifying subaltern knowledge beyond recognition, denying its coevalness, rendering it nonsense)".¹

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¹ Available at: <https://www.epistran.org/international-conference/abstracts-and-bios> (Accessed: 12 May 2024).

They also warn us against framing cultures reductively as homogeneous, since this “is seething with internal differences, striations, and power divides” (Price, 2023, p. 141). Stereotyping and downplaying differences has led for centuries to the most cruel situations: “...the stereotype of the carefree, lazy native, coasting through a life free from material ambition, was deployed by thousands of Europeans conquerors, plantation overseers and colonial officials in Asia, Africa, Latin America and Oceania as a pretext for the use of bureaucratic terror to force local people into work: everything from outright enslavement to punitive tax regimes, corvée labour and debt peonage” (Graeber and Wengrow, 2021, p.149).

If we consider that knowledge can only be used in the singular, all other ways of understanding the world cease to be valid, or even possible. The sole epistemology that has prevailed in the West utterly disdains cultural diversity. One of the most insightful criticisms of the domination of Western knowledge is that of Talal Asad (1986) in *Writing Culture: The Poetics and Politics of Ethnography*, co-edited by historian James Clifford and anthropologist George Marcus. Asad accuses anthropologists and translators of acting as colonial agents. Also very relevant are the ‘relational ontologies’ of Arturo Escobar (2018), which propose a ‘pluriverse’ that includes other worlds, and other knowledges. It is ultimately a question of going beyond the ‘One-World World’, criticized by John Law (2015).

2. Anthropology and non-western types of translation

To translate knowledge without contributing to epistemicide, to translate knowledge that is not constructed according to Western parameters, we need a type of translation that takes into account the plural, relational nature of the knowledge created by human, nonhuman, and extrahuman beings. We need a translation capable of achieving what Viveiros de Castro ([2009] 2014, pp. 40, 48) calls “a permanent decolonization of thought” (see also Page, 2021, pp. 15-16).

It goes without saying that translational processes play an extremely important role in the creation and distribution of knowledge and are “essential not just to the spread of knowledge but also to our conceptualization of what knowledge actually is” (Bennett, 2023, p. 444). Translating is both a way of disseminating knowledge and a way of disseminating power, and this power is of a very specific type. For centuries, the West was the original text that had to be translated in the colonies, so that those who lacked knowledge would learn and adopt the knowledge of the dominating power.

In recent decades, anthropology has proposed new practices in indigenous translation and interpreting that are in vivid contrast to the traditional ones, which “are being dismantled, with new approaches being developed by various communities, who rightly focus on their own needs and priorities. Social justice activism is fighting back against the conquest model that for centuries has dominated in the Western world, where various forms of intercultural communication have too often functioned as acts of violence serving political agendas” (Henitiuk and Mahieu, 2024, p. 170).

In anthropology, forms of translation have emerged that are well suited to indigenous knowledge. For example, shamanic translation stems from the idea that the shaman is a translator, because as observed by Abram (1996, pp. 14, 15), he travels to and from different worlds. There are many types of shamanic translation, which highlight “the error of generalizing Amazonian shamanic experiences under the same *modus operandi*. It encompasses a multitude of what we propose to understand as modes of translation, which perhaps only share the commonality of being a way to connect worlds and facilitate communication based on their differences” (Laia and Guimarães, 2022, p. 12). Shamans translate between human and non-human worlds. Their translations do not necessarily rely on words (Taylor, 2015, pp. 124, 141). Shamans include other bodies “in the movement of transpecific translation. The narrative of this displacement [...] is communicated to the rest of the people through the body-language, in a radical exercise of alterity” (Laia and Guimarães, 2022, p. 10). A very relevant feature of shamanic translations is that they want to preserve difference and not homogenize it by imposing equivalence (Taylor, 2015, p. 119). This feature, which emphasizes difference rather than sameness, appears in other anthropological translation proposals, such as those of Eduardo Viveiros de Castro or Boaventura Sousa Santos. This characteristic radically distances these proposals from the more traditional Western mode of translation, which values equivalence and faithfulness to the original text above all else.

Based on a cosmology inhabited by human and extrahuman beings, Viveiros de Castro ([2009] 2014) constructs and advocates perspectivism, whose aim is “not to find in human conceptual language a synonym (a co-referential representation) for the representations that other species employ to indicate the same thing ‘out there’; rather, the objective is to not lose sight of the difference concealed by the deceiving homonyms that connect/separate our language from those of other species” (Viveiros de Castro, [2009] 2014, p. 74). For Viveiros de Castro, shamanism is a mode of action “entailing a mode of knowledge, or, rather, a certain ideal of knowledge. In certain respects, this ideal is diametrically opposed to the objectivist epistemology encouraged by Western modernity” (Viveiros de Castro, [2009] 2014, pp. 60, 62). Perspectivism as translation means that translation encompasses the worlds of extrahuman subjectivities — dolphins see a river as a house, the small creatures that inhabit a garden see it as a forest, and jaguars see blood as manioc beer. Far from equivalence and faithfulness, translation is equivocation (Viveiros de Castro, 2004, p. 10).

Boaventura de Sousa Santos' intercultural translation also eschews the dichotomies or dualisms typical of Western translation, preferring instead to focus on the differences and similarities between cultures. Santos proposes intercultural translation as a way of avoiding the epistemicide of non-Western knowledge in its many varieties. For Santos, the two main procedures underlying the epistemologies of the South are ecologies of knowledges and intercultural translation (Santos, 2016, p. 212). Santos understands intercultural translation as the translation that could and does occur between “the knowledges or cultures of the global North (Eurocentric, Western-centric) and [those of]

the global South, the east included" (Santos, 2018, p. 34). He opts for what he calls "an ecology of knowledges" or "the recognition of the copresence of different ways of knowing and the need to study the affinities, divergences, complementarities, and contradictions among them in order to maximize the effectiveness of the struggles of resistance against oppression" (Santos, 2018, p. 8). This ecology of knowledges is closely linked to intercultural translation, because this must lead to nonhierarchical communication, with respect to difference. Translation thus becomes a political project that aims "at reciprocal empowerment" (Santos, 2016, p. 216).

Another type of translation that emerges from indigenous cultures is Jerome Rothenberg's 'total translation'. Total translation is related to 'ethnopoetics', a term that first appeared in Rothenberg's *Technicians of the Sacred* (1968). 'Ethnopoetics' explores the potential of primitive oral literature and its translation into English. In this sense, another important contribution is *Alcheringa: Ethnopoetics* (1970-1980), a journal with sound recordings that reflects on the importance of ethically translating indigenous knowledge and their oral verbal and non-verbal art. Rothenberg is aware that to translate Indian songs and poetry, he has to translate everything, especially orality and the visual aspects of language, as is the case of Navajo visual poetry since visual languaging among the Navajos consists of ceremonial sandpaintings, or drypaintings, which are part of the complex "Navajo chantway system, along with songs, masked dances, and a range of smaller and larger event-pieces (body painting, prayerstick planting, pollen events, herb events, et.) that work toward a balance of negative & positive elements in the patient and the world".² As in the previous cases, Rothenberg does not regard translation as a search for equivalence. Total translation "is not the reproduction of, or stand-in for, some fixed original, but [...] it functions as a commentary on the other and itself and on the differences between them. It is much more a kind of question than a summing up" (Rothenberg in Swann, 1992, p. 65). Total translation signifies translating not only meaning but sounds, sensations, emotions. Its aim is to bring us closer to the other, so that we do not remain in the one-world world: "I translate, then, as a way of reporting what I've sensed or seen of an other's situation [...] I know that in so far as I developed a strategy for translation from Seneca, I tried to keep to approaches I felt were consistent with their life-style" (Rothenberg, [1962] 1981, p. 78). His total translations of Navajo poetry deal with seemingly meaningless words, nonsense utterances and many other aspects of Indian poems that other translators had not considered, such as the music that accompanied the original. His translations of the Horse Songs are not easy to read because they are far from orthodox. We find phrases like *baheegwing hawuNnawu N nngahn* which we do not know to pronounce 'correctly' —since we assume there is a correct way to pronounce them, a right way to read these poems.

All these types of translation arise from ways of knowing the world that are far removed from traditional Western scientific knowledge. Anthropologists and poets who

² Available at: <https://www.ubu.com/ethno/visuals/navajo.html> (Accessed: 14 May 2024).

are close to the different and varied indigenous epistemologies have demonstrated the need to translate with more than five senses, with the whole body, those types of knowledge produced by human and non-human entities, that communication that takes place among the trees, among the birds, in the rivers and in the mountains. In this context, the so-called 'sensory turn' in anthropology (Howes, 2024; 2023; 2022; 2019; 1991) may be useful to develop new ways of translating non-Western knowledge. The sensory turn shows how different cultures use and prioritize the senses, how knowledge is not only achieved through the intellect. Following the sensory turn implies that knowledge is acquired in a polysensory way, and if this is so, the concept of translation needs to be broadened:

Can smell be translated into sound? How are biochemical signs translated into electromagnetic signs? What kind of reality does translation studies construct if it never deals with the translation of touch, smell or taste? [...] translation is a complex process: Meaning is a complex trajectory to which a multitude of factors contributes (Marais, 2019, pp. 55,56).

These ways of translating arise from the conviction that our bodies have formed themselves "in delicate reciprocity with the manifold textures, sounds, and shapes of an animate earth — our eyes have evolved in subtle interaction with other eyes, as our ears are attuned by their very structure to the howling of wolves and the honking of geese [...] We are human only in contact, and conviviality, with what is not human" (Abram, 1996, p. 22).

3. Joseph Beuys: Shamanic translator

Decades ago, earthworks, Fluxus, and body art artists experimented and translated meaning with the whole body, especially using the so-called 'lower senses'. Worth mentioning are classic earthwork sculptures, such as *Spiral Jetty*, *Broken Circle* and *Double Negative*. Also relevant are the site sculptors of the 1970s, such as Gordon Matta-Clark, Walter de Maria, Charles Simonds, Nancy Holt, and many others, who do not view the landscape as a subject for their work. Instead, their goal is to merge with it, commit themselves to its conservation, and become one with nature. Moreover, earthworks are also a way of avoiding gallery appropriation -thus, Richard Long sees art "as a return to the senses" (Rodaway, 1994, p. 3).³ Although some of these works leave no trace, and do not modify the landscape, others do not. This has led to harsh criticism from those who claim that such art does not conserve the land, and in fact, harms it.

Artists such as Mark Rothko and Jackson Pollock were genuinely interested in primitive myths. Pollock is especially interesting here because he was also familiar with the world of shamans (Rushing, 1989, p. 282). He grew up in the Southwest United States, where early

³ Long "builds his art from walking across the landscape, from an intimate sensual experience with space and the materials of his environment and forms his 'sculptures' in pattern with the landscape, its structure and material substance, both by leaving arrangements of stones and other materials in lines or circles in the landscape" (Rodaway, 1994, p. 3).

on, he interacted with Native American art and culture (Rushing, 1995, pp. 169-190). In an interview (Landau, 1989, p. 56), he stated that “I have always been impressed with the plastic qualities of American Indian art”. His visits to the Museum of American Indian Art and the American Museum of Natural History were important to his work, but the exhibition that marked him most deeply was Indian Art of the United States (1941) in the Museum of Modern Art. The collaborative exhibition by Donald Ellis Gallery and Washburn Gallery at Frieze Masters London featured a series of Pollock's drawings from the early 1940s with a selection of Native American art dating from the late 19th century, which included Yup'ik dance masks, Hopi kachina dolls and a totem pole attributed to Haida chief John Robson.

Works such as *Naked Man* (1938-41), *Guardians of the Secret* (1943) and *The Magic Mirror* (1941) exemplify Pollock's shamanistic influences (Firestone, 2017; 2008). Navajo sand paintings greatly inspired Jackson Pollock. His drip paintings are extremely haptic, in part inspired by the tactility of Navajo sand paintings. The sense of touch is here very important. Pollock's drip paintings reflect the integration in his work of the Native-American shaman as both a healer and artist. Seeing Pollock lay his whole body on the canvas covering the ground is clearly reminiscent of the Navajo healers in direct contact with the materiality of their sand paintings. Similarly, Pollock's paintings are also multisensory. A closer look reveals their multiple layers, textures, colors, and sensations that appeal to all the senses. Pollock paints with his whole body, translating sensations and emotions through the ‘lower’ sense of touch. Touch is here synonymous of bodily intimacy. In the same way as the shamans of the Navajo sand paintings, Pollock is in direct contact with the work of art. Like these shamans, he lives within the work, immersed in the creative process, which is more important than the final result:

On the floor I am more at ease. I feel nearer, more a part of the painting, since this way I can walk around it, work from the four sides and literally be in the painting. This is akin to the Indian sand painters of the West [...] Pollock also declared that, when actually painting, he was unaware of his actions: “When I am in my painting, I'm not aware of what I'm doing [...] because the painting has a life of its own” (Adams, 2011, p. 521).

But perhaps the most important artist-shaman in the second half of the 20th century is Joseph Beuys:

Beuys has clearly read a good deal about the role of the Shaman and about religious and magic practices in primitive tribes. And as in these tribes, in Beuys's work we cannot see the Shaman and his practices as separate from one another. (The Shaman has to take responsibility for his predictions - he is not only answerable to himself but to society) [...] Beuys goes back to the Shaman's original private function as investigator of the natural sciences, making references to the world of hunting, fishing and farming, but he combines that role with the more complex public one for the good of society, exploring the powers of plants, of drugs and minerals, the phases of the moon, the mysteries of life and death and so on (Seymour, 1983, p. 12).

Joseph Beuys is an example of what Rosalind Krauss (1984, p. 514) calls “hard primitivist”. Soft primitivists are those artists who are inspired “by the forms and symbols of indigenous cultures, that is their surface *visual appearance* [...] Here the ethnographic sources are appreciated primarily for their aesthetic qualities, not for their ethnographically specific symbolic and religious content [...] Hard primitivists, on the other hand, become involved in the recreation of indigenous rituals, assume the indigenous on a more personal level, and show a greater interest in the cultural context” (Schneider, 2006, pp. 38-39). Beuys was profoundly engaged with the ‘other’ “ever since his reported close encounter with the Tartars who saved his life after he had crashed his Stuka plane in the Crimea during World War Two. Beuys conceived of his art practices as similar to those of a shaman (or healer) and of his works as “social sculpture” (Schneider, 2006, pp. 38-39).

Some of Joseph Beuys’ works directly refers to the shaman, such as his drawings, *Trance in the House of the Shaman* and *Dance of the Shaman*. In the 1960s, his actions include *The silence of Marcel Duchamp is overrated*, *The Chief*, and *in us ... under us ... flooded*, and *How to explain pictures to a dead hare*, among others. These initiation rites all involve organic and magical forces, which expand the concept of ‘art’.

The Chief (1963-64), performed in galleries in Copenhagen and Berlin, is a ritual action lasting nine hours. He lay in a felt roll with two dead hares attached to his head and feet. Beuys positioned himself on the gallery floor, wrapped entirely in a large felt 2.25-meter blanket; the felt insulating him from the external world and facilitating his shamanistic communication with the animals. Emerging from either end of the blanket were the two dead hares, and at the base of the left wall, there was a 167 cm block of German margarine. At 165 cm from the floor, there was an installation of copper rod, a lock of hair, and two fingernails. On the right, against the wall, there was another block of margarine similar to the first one. Inside the blanket, Beuys held a microphone into which he breathed, coughed, groaned, grumbled, whispered, and whistled at irregular intervals. Spectators could hear his heart as well as the letters of the alphabet in disarray. The ‘theme’ of this action was ‘how to become a revolutionary’, which Beuys believed was necessary for any evolutionary process.

The hare, mythologically linked to notions of transformation and access to the earth's energies, is also present in his 1965 solo performance, *Wie man dem toten Hasen die Bilder erklärt* (How to Explain Paintings to a Dead Hare).⁴ Beuys, with his head entirely coated in honey and gold leaf, performed a sort of a guided tour of the art gallery by showing and explaining each work to a dead hare, which he held in his arms. Beuys communicates with the hare through touch:

Feeling is to touching as listening is to hearing. Feeling is active and exploratory. It takes things in hand, turning them over in all directions in search of information. Such is the tactility of the blind, who seek to identify the objects in their paths or throughout the day

⁴ Re-enacted in 2005 by Marina Abramovic, alongside with Ai Weiwei, Olafur Eliasson, Christoph Schlingensief and Matthew Barney, to name but a few.

with a precise probing of their surroundings, most often through simple contact with things already known. Feeling is a kind of tactile penetration that goes deeper to discover what surface information alone cannot provide (Le Breton, [2006] 2017, p. 102).

Spectators had previously been locked out of the gallery and could only observe his performance from the outside through a window. Occasionally, he would stop and return to the center of the gallery, where he stood over a dead fir tree lying on the floor. After three hours, the public was let into the room. Beuys sat upon a stool in the entrance area with the hare on his arm and his back to the onlookers. He is an example of the sensory turn in anthropology because he communicates through touch, a very important sense to translate knowledge:

The tactile sense encompasses the entire body, inside and out. It emanates from the whole expanse of the skin, unlike the other senses, which are more circumscribed. We feel the surrounding world at every bodily surface and in every instant, even while we sleep. Sensory experience is first and foremost tactile experience, contact with others and objects, the feeling of our feet touching the ground. The world imparts its forms, volumes, textures, shapes, masses, and temperatures to us through its endless layers of skin (Le Breton, [2006] 2017, p. 95).

Human rationality is not something too appealing to Beuys: "The idea of explaining to an animal conveys a sense of the secrecy of the world and of existence that appeals to the imagination. Then, as I said, even a dead animal preserves more powers of intuition than some human beings with their stubborn rationality. I try to bring to light the complexity of creative areas". In Beuys' performances, rational models of thought are eliminated, and the earth thus becomes a means of communication:

The hare has a direct relation to birth [...]. For me the hare is a symbol of incarnation. The hare does in reality what man can only do mentally: he digs himself in, he digs a construction. He incarnates himself in the earth and that itself is important. Or so I see it. Using honey on my head I am naturally doing something that is concerned with thought. The human capacity is not to give honey, but to think -to give ideas. In this way the deathlike character of thought is made living again. Honey is doubtlessly a living substance. Human thought can also be living. But it can also be deadly intellectually, and remain dead, externally deadly in the areas of politics or education (Beuys quoted in Adriani et al., 1979, p. 132).

The relationship between reason and intuition is key to understanding Beuys's actions as shamanic translations. In the concept of 'reason', Beuys includes logical thinking, which, because of its rigid and closed nature, paralyzes all activity. On the other hand, Beuys believed that intuition could effectively broaden this limited form of thought. The conventional concept of knowledge can expand, thanks to the world of sensations and emotions. Without rejecting more traditional stances, the scope of this organic principle can be enlarged to include spiritual and sensual dimensions. This is all related to what Beuys called 'the primitive wisdom of being', to mythology, to the development of the animal part of man, and to his cosmic concept of creativity.

His installation *Plight* (1985) is an idea with a positive pole and a negative one. On the one hand, there is a difficult situation or dilemma and on the other, there is trust and a bond. This bond is not only between human beings, but also between human beings and Nature, which includes animals, plants, and the Earth. As Bastian (1985, pp. 12-13) writes, Beuys champions freedom as the very foundation of '*Ausgeliefertsein*', the surrendered being. Beuys is concerned about man's lack of sensitivity towards Nature:

In an epoch that linked man with water, and the animal with the stars, the moon could be the head of a decapitated goddess. We have buried that era, which the Stoics called 'sympathia universalis', under a mountain of earth. In the face of it, nothing stands today but a circular, closed structure, a truth that is nothing but a beginning. Just as the 'fact in itself' is something that exists without interpretation, so 'man in himself' is a thing that cannot be grasped. In the conclusions of modern philosophy and modern ethnology - which suppress the dichotomies of society and history, of wild thought and convergent thought - man is the 'figure of a process'...The answers that we give ourselves today with respect to ourselves must remain a step behind, and are, at the same time, the unknown (Bastian, 1985, pp. 8-9. My translation).

However, for Beuys, the primitive world is not a form of evasion, but quite the opposite. It is a way of attacking the closed, static, and dogmatic structures of contemporary society:

I do not want to go back to the magical or mythical world, but I want to pursue with the help of these pictures a visual analysis, and also to bring an element of visual analysis to consciousness [...] I do not want to go away from modern achievements, I want to go closer to them, I want to expand in that I attempt to create a larger basis for understanding [...] Had I expressed all this in recognizably logical statements, in a book, for example, it would not have been successful, because modern man is inclined only to satisfy his intellect and to understand everything according to the laws of logic. But it was not up to me to unilaterally address logic, it was up to me to break off all the residues present in the subconscious and to transfer a chaotically detached orderly procedure into turbulence, the beginning of the new always takes place in chaos (Beuys in Bastian, 1985, p. 72).

Relevant to all these ideas is Beuys' interest in animals (Seymour, 1983, pp. 14-21) and, particularly, in bees, which began when he was a student of Ewald Mataré. The archetypal representation of animals becomes the equivalent of Nature and the primitive world, of everything that civilization has not yet modified. In 1971, in an interview with Achille Bonito Oliva, Beuys said about the significance of animals in his work: "If I want to give man a new anthropological position, I also have to attribute a new position to everything that concerns him. To establish his downward ties with animals, plants, and nature, as well as his upward links with angels and spirits" (in Bonito Oliva, 1990, p. 81).

Bees, hares, deer, mice, and sheep are recurring motifs in Beuys' actions. They are ways of expanding our knowledge of the world and of ourselves. In fact, Beuys' theories on sculpture are based on the analysis of the physical-organic universe of bees. This type of sculpture is based not so much on the optical and rational perception of reality as on physical stimuli as well as on intuitive and sensual experiences that defy codification. On

this issue, as on others, he was influenced by Rudolf Steiner, and also by the pantheistic, mythological, and symbolic interpretations of Maurice Maeterlinck.

Bees generate heat and are thus capable of producing wax, from which they 'sculpt' hexagonal cells. For Beuys, this creation of heat and the construction of honeycombs are primary sculptural processes that consist of the chaotic flow of heat retention. This is in turn a source of energy that gives off 'spiritual heat', as Steiner would say. The final result is a set of geometric forms that arise from the initial chaos. The analysis of all these processes is the origin of Beuys's interest in materials such as wax or fat (e.g. his works *SaFG SaUG* and *Fat Sculpture*).

The heat organism of the bee colony is without a doubt the essential element of connection between the wax and fat and the bees. What had interested me about bees, or rather about their life system, is the total heat organization of such an organism and the sculpturally finished forms within this organization. On one hand bees have this element of heat, which is a very strong fluid element, and on the other hand they produce crystalline sculptures: they make regular geometric forms. Here we already find something of sculptural theory, as we do in the corners of fat, which also appear in certain situations in a geometric context. But the actual character of the exiting heat is a fluid element, whereby the fat is affected by the heat and thus flows off. From this undefined element of motion, by way of a diminishing element of movement, surfaces a form which appears in abstract, geometric configurations. This is practiced regularly by bees (Beuys in Bastian, 1985, pp. 41-42).

In 1974, Beuys performed *I Like America and America Likes Me*, his first performance in the United States, also known as *El Coyote*. The work began when Beuys started his trip from Düsseldorf to New York. When he arrived at the airport, he wrapped himself in a felt blanket - the artist's fetish material - and leaned on a large shepherd's crook. Beuys was driven in an ambulance to a gallery where he shared a room for three days with a wild Coyote. The viewers watched the two specimens behind a wire mesh and observed the artist's and the animal's continuing interaction with each other, how the artist talked to the animal, offered it various objects and interacted with it. The coyote would bite the felt, circle the artist or piss on the *Wall Street Journal*, a symbol of capitalism. At the end of the three days, Beuys hugged the coyote. Apparently, they had become friends, and just as he had come, he returned to Germany without having set foot on New York soil for the entire trip.

Beuys argued that this week-long performance at the Rene Block Gallery in New York reflected the history of the persecution of the American Indians, as well as the relationship between the United States and Europe. He wanted to concentrate only on the coyote, which symbolized a once-pure natural world and the disappearing land of Native Americans. He said he wanted to isolate himself, to see nothing of the United States but the coyote and to exchange roles with him. The confrontation between Beuys and the coyote symbolized for many the reconciliation between culture and nature. The artist's howls and Teutonic words, a kind of meeting of cultures. The work in general, a kind of

attempt to heal America from the trauma caused by one of the greatest genocides of Native Americans in history. In performances such as *Coyote*, Beuys presented himself “as a shamanic figure, communing with an animal formerly deified by the American Indians in order, symbolically, to recover a lost relationship for the materialist West” (Hopkins, 2000, p. 86).

4. Conclusion

The first half of the 20th century was a time when contemporary art showed a great interest in primitivism. Western artists and writers have been interested in non-literate societies ever since the beginning of the 20th century. Examples include Gauguin's paintings in Tahiti, and the primitivism of early 20th century art, such as Picasso's African masks or the primitive art of Mark Tobey, Adolf Gottlieb, Eric Fischl, and Franz Kline, among others. *Les Demoiselles d'Avignon*, for example, was featured in the MOMA exhibition “*Primitivism in 20th Century Art: Affinities of the Tribal and the Modern*” (1984). However, we should bear in mind that the painting aroused heated controversy⁵ because it was presented alongside African masks, which could have been Picasso’s inspiration for two of the women in his painting. However, according to the catalogue, he claimed never having seen these masks. Cubism transformed African sculpture into something completely modern.

For centuries, museums have spoken on behalf of people. They have created knowledge from a Western perspective. They have “a long and troubling history” (Sturge, 2014, p. 431). From their emergence in the eighteenth century, they have imposed how to look, walk, hear and talk in those spaces (Leahy, 2012). Museums are translation sites (Simon, 2019) which have power because they rewrite history through the construction of official knowledge (Sleeper-Smith, 2009) and have contributed to epistemicide by translating non-western peoples as stereotypes,⁶ as wordless and powerless objects of visual consumption [...] it was the mid and late nineteenth century that saw the great expansion of museums as sites to show artefacts collected – under anything but reputable circumstances – from what were considered the ‘primitive’, ‘natural’, or ‘tribal’ peoples of the world (Sturge, 2014, p. 431).

Beuys was one of the first artists in the 20th century who highlighted the possibility of using the space of the museum as a way to contest Western forms of knowledge. Only recently museums have started to think critically about who and how decided to present objects (Geismar, 2018). “Post-museums” (Neather, 2018, p. 365) are now “translation zones” (Neather, 2021a, 2021b). Whereas traditionally museums privileged the sense of

⁵ According to Clifford (2013, p. 358), the exhibition of tribal objects deprives them of their context and cultural significance. See also Schneider, 2006, pp. 29-31.

⁶ “Notions about the ‘primitive’ nature of Indian society influenced what was collected and how it was displayed. Most frequently, Indigenous peoples were described in terms of deficiencies. Consequently, Indians were measured against the ideals of Western society; and whether describing beliefs, values, or institutions, they were measured against the institutions that Western society most cherished about themselves at the time” (Sleeper-Smith, 2009, pp. 1-2).

sight (Howes and Classen, 2014), in these new translation zones they are beginning to translate knowledge with all the senses.

In the 21st century there are many other examples of how post-museums are beginning to change the traditional way of translating knowledge (Edwards, Gosden and Phillips, 2002). Post-museums are now spaces occupied by indigenous artists (Page, 2023; Schneider and Wright, 2016; Gadoua, 2014; García Canclini, 2014; Loft and Swanson, 2014; Dudley, 2010) and non-human beings (Page, 2021; Woodward and McHugh, 2017) where knowledge is translated not only through the intellect but also through the senses (Salter, 2015; Jones, 2006). And new research programs focused in cultural and artistic activism of Indigenous peoples in relationship to new media show “how can different bodies and cultures engage, transform, and resist dominant paradigms of power and oppression through the senses” (Salter, 2018, p. 87).

All these examples and many others show that new research avenues are being developed which demonstrate that contemporary art can be an example of the new way of translating non-western knowledges. These new avenues are characterized by openness, equivocation, the sensorial, and the intermingling of different worlds. They are the opposite of the One-World World and of epistemicide.

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THE TRANSLATION CHARACTER OF *STRADBROKE DREAMTIME* BY OODGEROO NOONUCCAL

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ABSTRACT: This article delves into Oodgeroo Noonuccal’s short story collection *Stradbroke Dreamtime* (1972) from a translation perspective. A national best-seller and a well-known classic of Australian children’s literature, Noonuccal’s narrative includes 27 illustrated stories, half of which are autobiographical, and half drawn from the author’s knowledge of Indigenous spiritual cultures and oral traditions. Specifically, the exploration focuses on the inter-epistemic translational processes within Oodgeroo’s work, including the transformation of performative and visual narratives into written form, the translation of Indigenous knowledge into children’s literature, and the transmission of her life experiences and cultural background to individuals of diverse descent, thus raising awareness of Aboriginal epistemologies within a multicultural readership. The twofold objective is to suggest new methodologies applicable to the examination of Indigenous translation and underscore the significance of translation as a heuristic paradigm for the study of Indigenous cultures.

KEYWORDS: (Inter-) Epistemic Translation, Indigenous Australian Literature, Children’s Literature, Aboriginal Narrative, Translationality

1. Translational Processes in Aboriginal Writing

In 1964, Oodgeroo of the Noonuccal tribe (1920-1994, formerly known as Kath Walker) gained renown as the first published Aboriginal poet in Australia with her debut collection, *We Are Going*. Beyond her literary achievements, Oodgeroo was a prominent socio-political activist, advocating for treaties concerning Indigenous human and land rights. Additionally, she devoted the final two decades of her life to teaching, specifically focusing on children’s education on North Stradbroke Island, her birthplace off the Queensland coast (Hatherell, 2012, p. 4). Her extensive connections with Indigenous communities stretched across Australia and beyond, to Aotearoa New Zealand, Malaysia, Fiji, China, India, Russia, Nigeria, and the USA. Oodgeroo’s global travels involved representing Indigenous interests, delivering lectures, and participating in international gatherings. Today, her literary contributions — which reconstruct the memory of an ancient Indigenous past, intricately weaving it with official Australian history and hegemonic narratives — are recognised for their groundbreaking impact in bringing Indigenous narratives to broader attention.

In 1972, at the apex of her fame as a poet and activist, and still known by her Anglophone name Kath Walker (she would change her name in 1988, as a sign of protest against Australia’s bicentenary celebrations and as a symbol of pride in an Aboriginal

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heritage), Oodgeroo published her first narrative book, *Stradbroke Dreamtime*. This autobiographical work includes 27 stories for children, written in English, presenting two aspects of her life: the first part includes episodes from her childhood spent on Minjerribah (North Stradbroke Island), while the second part collects Creation stories from Stradbroke Island and the Tamborine Mountains, and stories based on the author's knowledge of her people and the land.¹ Oodgeroo crafted the book between 1969 and 1972 upon returning from the "concrete jungle" of Brisbane to Minjerribah, before establishing the Noonuccal-Nughie Education and Cultural Centre to promote the study and firsthand experience of First Nations culture (Hatherell, 2012, pp. 3-4). Until her death in 1993, Oodgeroo would live there in a caravan, with thousands of children and teens regularly visiting and camping nearby.

Since its first publication in 1972, *Stradbroke Dreamtime* has achieved widespread popularity, selling thousands of copies across its five editions and earning recognition as a national best-seller. In 1994, the work was honoured with the Australian Children's Book Council Book of the Year Award. Notably, besides its success in English, *Stradbroke Dreamtime* holds the distinction of being the first piece of Indigenous Australian literature to be translated into another European language. Over the years, it has been translated into Polish, Japanese, German, and partially into Italian (Walker, 1977, 1981; Oodgeroo Noonuccal, 1998a, 1998b; Petrilli, 2017; Zanoletti, 2012, 2017).

It may therefore come as a surprise that, in spite of these notable achievements, *Stradbroke Dreamtime* has received limited scholarly interest thus far. Considering that it was not until the publication of this book that the Creation stories of Southeastern Queensland came to be written from a First Nations perspective (McKay, 2007, p. 94), and despite increased interest sparked by Noonuccal's centenary celebrations (Sharma, 2020; Pal, 2020, 2021; Zanoletti, 2021, 2023; Swan, 2022; Ryan, 2023; Wright, 2023), academic contributions on *Stradbroke Dreamtime* remain scarce, with only a few notable mentions (Petrilli, 1995, 2017; Jones, 2003, 2004, 2009; Zanoletti, 2017, 2024b; Kwapisz Williams, 2018; Pal, 2021). Among them, particularly noteworthy is Jennifer Jones' research documenting the revisions and rewritings done by the editor to put Oodgeroo's manuscript into publishable form, a form which was domesticated to suit Anglophone norms. Jones' study reconstructs the collective process that gave rise to the final work, including the dynamics of standardisation of the text during the process of editorial revision.² Equally inspiring is Susan Petrilli's contribution (2017), approaching *Stradbroke Dreamtime* from a semiotic point of view and emphasising its inherently translational nature. What appears

¹ Aboriginal peoples scattered across the continent have always been divided into hundreds of linguistic groups, each with its own territory, history, language and culture. However, they share a common oral tradition involving the stories of the Dreamtime or Creation (these are referred to by different names in their various languages), which provided a code of life that was and still is the basis of their existence.

² In an email message dated February 2024, Jones states that at the time she would have liked to publish a version of *Stradbroke Dreamtime* that restores the original text, but the combination of willing publisher / Oodgeroo's family support did not arise. Kwapisz Williams (2018, p. 34) inaccurately reports that in 2006 the book was reissued by Vulgar Press in a version edited by Jones which "restores this important Aboriginal text and offers it to a new generation".

to be a limitation is that, despite the shared emphasis on Oodgeroo's cross-cultural awareness and communication, Noonuccal's commentators (mostly literary scholars or historians, rather than translation scholars) have yet to fully grasp the translational character of her endeavour—meaning by 'translation' not a purely linguistic transcoding, but a process of interpretation and reperformance aimed at creating new relationships, new meanings, new knowledge (Petrilli, 2003; Marais, 2019, pp. 122-123; Bennett, 2023).

This paper seeks to address this gap in the literature by examining Oodgeroo's narrative work through the lens of (inter-) epistemic translation. Drawing on prior research, archival investigations, and personal involvement with the author's estate and community (Zanoletti, 2012, 2017, 2021, 2023, 2024a, 2024b), as well as applying a number of relevant theorisations from the field of translation studies (Robinson, 2017; Marais, 2019; Petrilli and Zanoletti, 2023; Bennett, 2024a, 2024b) and beyond (Santos, 2016, 2018) I aim to tackle two fundamental questions: first, what constitutes the translational dimension of Oodgeroo's work?, and second, in a broader context, how can a translational perspective, grounded in an understanding of translation as a phenomenon inherent to all semiotic transactions, provide deeper insights into creativity across various domains? To this end, whilst elsewhere I have focused on the intralingual and interlingual character of Oodgeroo's translation work (Zanoletti, 2024a), in this contribution I want to shift the attention to processes that go beyond the mere verbal sphere. Particular reference will be made to two interrelated but distinct phenomena: *interepistemic translation*, i.e., translation between different paradigms of knowledge (see Robinson, this issue), and *epistemic translation*, i.e., the construction of knowledge (or discourses) from primary perception (see Marais, this issue). Applying this distinction, I shall investigate Noonuccal's act of translating Indigenous knowledges and stories into children's literature, turning performative and visual narratives into writing, and bringing the heritage of the Aboriginal peoples to the attention of a globalised community of readers.

Ultimately, what I aim to argue is that these underlying translation processes show *Stradbroke Dreamtime* to be far more multilayered than it seems at first glance. Unearthing these dynamics also highlights the complexities behind the construction of knowledge more generally, contributing to expand the object of translation studies beyond the standard realm of professional translation of written texts (Tymoczko, 2006; Marais and Feinauer, 2017, pp. 2-3; Meylaerts and Marais, 2023, pp. 1-2; Bennett, 2024b, p. 11-12).

Such a perspective is shaped by my cultural background as a female white Italian translation researcher who lived in Australia for a period and has since returned to Italy. This perspective, I am aware, differs from Oodgeroo's viewpoint and from the "performativity" of her audience at the time *Stradbroke Dreamtime* was initially published (Robinson, 2017, p. x). As a non-Indigenous observer, I subjectively interpret her work, understanding it in the light of translation theories encountered in my academic journey and in relation to my personal values, experiences, and semioethical stance (Petrilli, 2015).

The discussion that follows is structured in three sections. The first section recalls some of the most pertinent conceptualisations of (inter-) epistemic translation that form the theoretical background to my analysis, and briefly reports on the methods and desired outcomes of my study. The second section examines (inter-) epistemic translation in *Stradbroke Dreamtime*, providing examples. The conclusions highlight how the unpacking of these processes encourages engagement with new ways of thinking around translation, contributing to conceptualising the translational dimension of culture and society globally (Marais, 2019, 2022).

2. Conceptualising (Inter-) Epistemic Translation

The starting point of my analysis of Oodgeroo's literary work is that translation is more than a transfer of textual features from one language to another (Jakobson, 1959; Robinson, 2017, p. viii), but instead a phenomenon intrinsic to all communication and meaning-making processes. Accordingly, translation between languages is seen as a specific case of translation across sign systems (Petrilli, 2003a, p. 41; Marais, 2019; Petrilli and Ji, 2023).

Such view is shared by several scholars, although the classifications proposed vary considerably (Petrilli, 2003; Sütiste, 2021; Torop, 2023; Petrilli and Zanoletti, 2023, pp. 342-345). Recent contributions to the debate include Kobus Marais's radical argument (2019, p. 57) that all forms of translation are intersemiotic insofar as they occur among semiotic systems in addition to within the same semiotic system. Rather than Roman Jakobson's tripartite distinction between intralingual, interlingual, and intersemiotic translation, where the latter is defined as an interpretation of verbal signs by means of signs of nonverbal sign systems (Jakobson, 1959), Marais proposes the categories of intra-systemic, inter-systemic, and extra-systemic translation, irrespective of what those systems are, and replaces such expressions as 'source text' and 'target text' with 'incipient sign system' and 'subsequent sign system'.

In recent years, reflection on translation has been further enriched by Douglas Robinson's introduction of 'interepistemic translation', a notion particularly suitable to explain the inherently translative character of *Stradbroke Dreamtime*. Among the scholars who have ventured to rethink Jakobson's tripartite distinction, Robinson (2017, p. 200) designates interepistemic translation as passage from one incipient Epistemic System (ES) to a subsequent one, like when one author "reframes the narratives in one written genre (or semiotic world), popular or 'narrative' neuroscience, as a narrative in a different written genre (or semiotic world), the novel". Other examples include educational and popularisation mechanisms (i.e., compilations, students' notes, magazine articles, TV documentaries, picturebooks, etc.), as well as the reworking of specialist knowledge into literature and art (Bennett, 2023, pp. 444 and 448). As Robinson suggests, this phenomenon can also manifest itself as a process of transfer and transmission ('translationality') that reworks previous knowledge in accordance with new cultural and ideological configurations, involving adaptation and transformation (Robinson, 2017, p. 22; also Bennett, 2023, pp. 443 and 448-450; 2024a, p. 10) as well as when transferring

information between two different epistemic regimes such as Indigenous knowledges and Western epistemes.

In *Stradbroke Dreamtime*, as we shall see, *interepistemic* translation occurs between the Creation, or ‘Dreamtime’, stories belonging to the Indigenous Australian societies and Western-style literary codification, while *epistemic* translation is in action as the meaning-making mechanism through which new discourses are constructed (Marais, this issue; Bennett, 2024a, p. 10). Through translation, Oodgeroo contributed to counter the monopoly exercised by Western Science on what was considered to be ‘knowledge’, through which the Indigenous knowledges of the Global South are sidelined and deprived of intellectual authority (Bennett, 2023, pp. 444-445; 2024b, p. 2; Santos, 2016, pp. 212-236).

Robinson (2017, p. 201) explains interepistemic translation with a flowchart, where Epistemic Systems (ESs)—systems that attempt to construct a coherent reading of reality—are connected by vectors within a multidirectional whole. The line diagram displays how the interaction between different systems invariably brings about transformation and change. This interpretative network composes a dynamic framework, informed by continuous interactions and collaborations that make the construction of knowledge endlessly unstable, provisional, and dialogic. Drawing on Robinson’s model, the new flowchart proposed (Fig. 1) attempts to diagram the (inter)epistemic dynamics concerning *Stradbroke Dreamtime*.

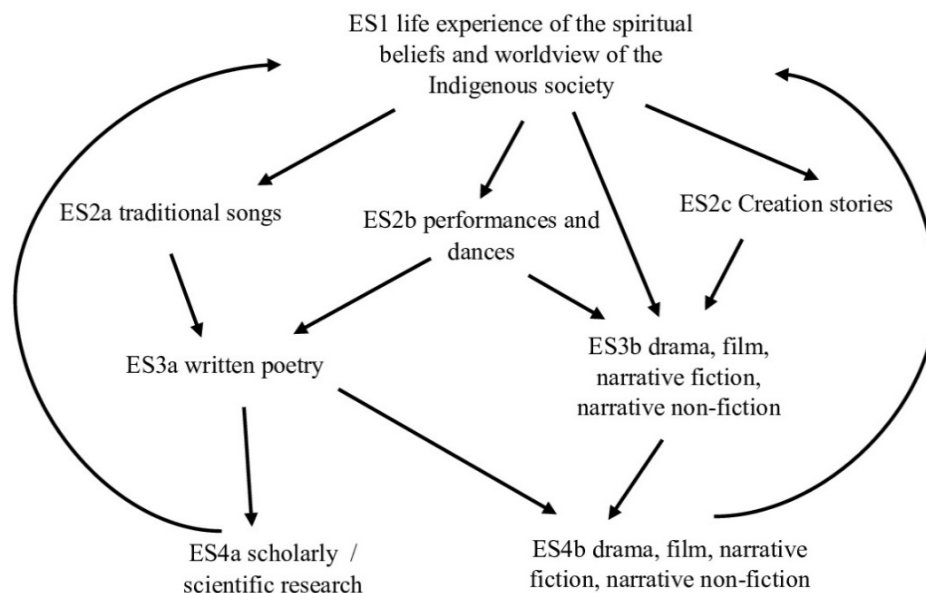


Figure 1. Flowchart of (inter)epistemic translation in *Stradbroke Dreamtime*

As visible in the flowchart, the various translational processes involved in the production of *Stradbroke Dreamtime*, even before conventional interlingual translation is contemplated, make it an object for translation research. In the chart, *ES1 to ES2c to ES3b* would be the translational trajectory followed by Oodgeroo in creating *Stradbroke*

Dreamtime. Also implied in that line diagram is what Jakobson defines as ‘interlingual translation’. We can see it twice: in the trajectory *ES2c to ES3b* (resemiotising Creation stories from Aboriginal Australian languages and dialects into English); and *ES3b to ES4b* (translations of *Stradbroke Dreamtime* into other natural languages) (see Petrilli, 2017, p. 65; Bandia, 1993, p. 56).³

It is important to note that interepistemic translation is not only a device for sharing the world with those who do not share our knowledge or experience, but it also raises awareness of the fact that no single form of knowledge is complete in itself but exists in a complementary relationship to others (Santos, 2016, p. 221-224). And while imperial epistemologies have represented the Indigenous Other as primitive, impressionable, incapable of self-representation, this kind of interepistemic translation can be used as an exercise in existential self-reflectivity, a struggle against the great powers of consumerism and colonialism, and a claim of pre-consumerist, precolonial memory which works toward the ecologies of knowledge necessary to achieve cognitive justice (Santos, 2016, pp. 188-211; Bennett, 2023, p. 454).

From this viewpoint, *Stradbroke Dreamtime* can also be viewed as part of a strategy of cultural resistance against ‘epistemicide’ (Santos, 2016; Price, 2023), understood as the systematic eradication by western science of the Indigenous knowledges belonging to *Terra Australis* (southern land). With this work, Noonuccal decontextualises and recodes several ‘Dreamtime’ stories, placing them in contact with external influences within a global cultural system. And while the first wave of post-colonial literature discussed the problem of whether or not to write in the colonizers’ language (Vidal Claramonte, 2012, p. 272; also Shoemaker, 2004, pp. 182-183), the hegemony of the English language in the globalised world as a form of “linguistic imperialism” (Bennett, 2024b, p. 2) is pushed to the extreme by Oodgeroo, who acts as a mediator.

Throughout the book, for instance, Noonuccal employs the word ‘Dreamtime’, the translation of the Aranda/Arrernte word ‘*Alcheringa*’ superimposed by the English invaders (Oodgeroo, 1990, p. 8). In *Stradbroke Dreamtime* the word serves as a calque, i.e., a translation technique by which Indigenous concepts, sayings, and idiomatic expressions that are absent from the culture of the subsequent sign system are translated almost literally into European languages (Bandia, 1993, pp. 64-67).⁴ In *Stradbroke Dreamtime*

³ As denounces Oodgeroo (1990, p. 5; see also Gnechchi Ruscone, 1999, p. 183), “originally, there were 350 entirely separate Aboriginal languages and 750 dialects; the tribes of Australia had a rich and diverse culture [...] The Aboriginal legends were recorded by many of the invaders, who saw it as a way of making money.” Between the late 1940s and the early 1950s what Adam Shoemaker (2004, pp. 86-87) refers to as “traditional Aboriginal literature not written by Aborigines” came into vogue, due to the efforts of white anthropologists who sought out traditional Aboriginal myths during their field work. In such cases, the English translation of the recording, carried out on the basis of a simplified phonetic transcription, reflected the anthropologist’s preconceptions and interpretation of the incipient sign system.

⁴ This translation is far from unproblematic. Not only does the word ‘Dreamtime’ deviate from the Aboriginal idiom but it is also an artificial paraphrase introduced by white scholars; however, it still aims to convey the mystic and spiritual character of the incipient sign system and, due to its widespread popularity, is easily understandable by a non-Aboriginal audience. See Zanoletti, 2024b.

calques, translations, toponyms, names and expressions in the Aboriginal languages and references to Indigenous cultures all contribute to create a blending of Indigenous and western discourses resulting in a *code métissé*, where diverse perspectives do not relate in a merely additive manner but rather mesh in transformative ways, generating new meanings (Bennett, 2024b, p. 14). Such a process manifests itself as an adaptational and ultrasemiotic sign-shifting work (Gottlieb, 2018, pp. 51-52), which contributes to Oodgeroo's transmission of knowledge, experiences and values, and to the expansion of her communication network.

3. The Translation Character of *Stradbroke Dreamtime*

Drawing together the conceptualisations illustrated above, let us now analyse three aspects of *Stradbroke Dreamtime* that are revelatory of its translational character: autobiographical writing, diamesic resemiotisation, and imagetextual synergy. The approach that I employ for conducting the analysis is grounded in a practical limitation: it has proved impossible to identify and retrieve the sources (e.g. oral and bibliographic sources, recordings, testimonies, iconographic and visual materials) used by Oodgeroo to write *Stradbroke Dreamtime* and therefore to compare them with the published book. This comparison would have enabled the retracing of the (inter-) epistemic translation processes involved in Noonuccal's writing. Unfortunately, the folder held in the Fryer Library of the University of Queensland containing material on *Stradbroke Dreamtime* does not shed any new light on the origins of the stories. The material consists of a few pieces of original artwork and a marked-up typed manuscript of the work. Comparing the manuscript to the published work, no substantial changes from draft to publication emerge. The draft of the introduction, in particular, provides no information excluded from the published version.⁵ Therefore, I have shifted the attention from the comparison between incipient sign system(s) and subsequent sign system to a thorough analysis of Oodgeroo's work, mainly based on the identification of intertextual references and various forms of appropriation and reframing, such as the selection of contents and the addition of new semiotic material, including textual and paratextual elements (Bennett, 2024a, p. 9).

In my investigation, the expressions 'incipient sign system' and 'subsequent sign system' are employed throughout, to emphasize the time-based, intersemiotic, and intersystemic nature of all translative processes. Moreover, to highlight the multimodal character endemic to any instance of expression and communication, all case studies are provided as Figures, even when the signifying code employed by Oodgeroo is apparently monomedial, as in the case of a printed text. For the sake of uniformity, all the examples

⁵ E-mail correspondence with Jeff Rickertt, Fryer Library, February 2024. This information contrasts with Jennifer Jones' comparison between the manuscript and the final version of the book. In her published research, however, Jones does not explore the link between Oodgeroo's sources and her creative work.

analysed have been taken from the 1999 edition of *Stradbroke Dreamtime*, illustrated by the Bundjalung artist Bronwyn Bancroft.⁶

3.1 Autobiographical Writing

The first part of *Stradbroke Dreamtime*, entitled “Stories from Stradbroke”, includes 13 stories inspired by the author’s childhood (Walker, 1972, p. 10). With these stories, from a semiotic viewpoint Oodgeroo translates her life experiences into narratives, in close relationship with the places, the people and even the words with which they are born (Petrilli, 2017, p. 65). Written as a grownup, these excursus are imbued with the political, pedagogical, and literary awareness of the adult Kath. However, the point of view is always that of a child, and stories sound amusing and light-hearted. The protagonists are the little Kath, her parents and siblings, the island, and its natural beauties. In this scenario, the ethical and ecological codes of conduct that regulate Noonuccal society emerge. Family and social dynamics, daily activities, the relationship with surrounding nature and the creatures living on the island enrich these stories with charm, freshness, and appeal. As the incipit of one of those stories, titled “Kill to Eat” (Figs. 2 and 3) suggests, many experiences that Oodgeroo describes are common to Aboriginal and non-Aboriginal children, and any reader can easily identify with the protagonist.

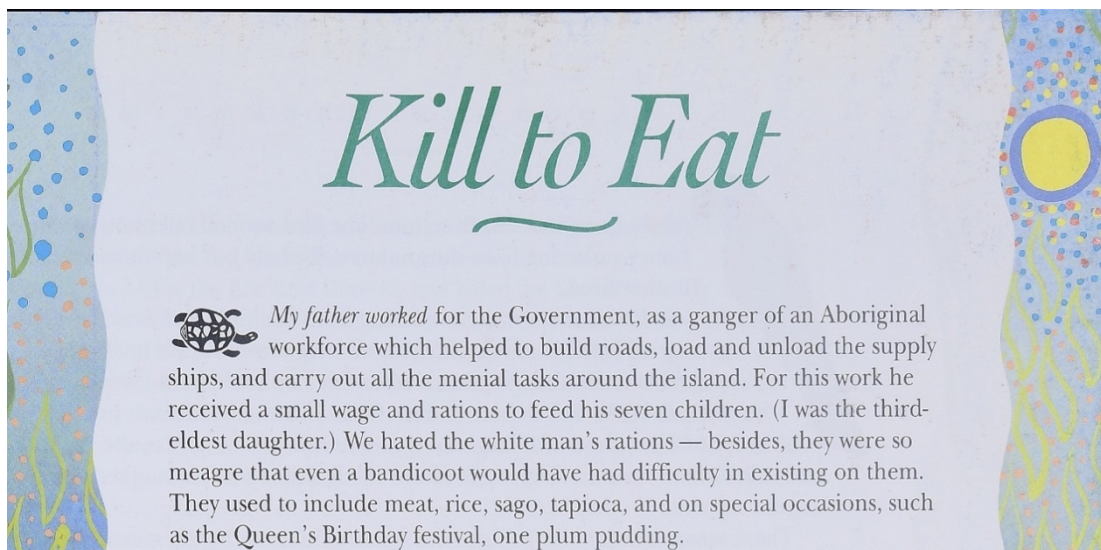


Figure 2. Oodgeroo N. (1999). *Stradbroke Dreamtime*, Sydney: Angus & Robertson, p. 9 (detail).

⁶ Bronwyn Bancroft’s work is held by the National Gallery of Australia, the Art Gallery of New South Wales, and the Art Gallery of Western Australia. She has illustrated more than 20 children’s books, including the 1994 and 1999 editions of *Stradbroke Dreamtime*. The similarities and the differences between the different editions of Noonuccal’s book, with a particular focus on the paratextual elements and the relationship between the words and the images, will be further explored in an ad hoc study.



Figure 3. Oodgeroo N. (1999). *Stradbroke Dreamtime*, Sydney: Angus & Robertson, pp. 9-10.

“Kill to Eat” revolves on one central theme: the code of rules regulating the Noonuccal community on Minjerribah. The story teaches that, according to the Aboriginal law, killing for the sake of killing is forbidden. Kath’s parents transmitted this rule to their daughter, and obeying the law is not just important, but vital for the preservation of the natural environment.

The first lines of the story reveal the tone and the setting of the story. It is a simple narrative, suitable for children from 9 years of age. The language is apparently plain, with easy vocabulary and syntax, and a few references to the real world. We learn soon that two cultures shaped Oodgeroo’s daily life: white Australia and Aboriginal Australia. Her father “worked for the Government”, and “for this work he received a small wage and rations to feed his seven children”. Soon after the father, the narrating self appears on the scene, although in brackets: “(I was the third-eldest daughter).” In the next sentence, the individual self gives way to the collective dimension of a “we” opposing the white world: “we hated the white man’s rations”. The paragraph concludes with two poignant references: a simile derived from Australian wildlife associates Kath’s cravings to those of a marsupial (“even a bandicoot would have had difficulty in existing on them”), followed by a straightforward allusion to colonial Australia (“Queen’s Birthday Festival”). The co-existence of Indigenous elements and Anglo-European elements is accentuated by a food list made of autochthonous products (“meat, rice, sago, tapioca”) and a British recipe (“one plum pudding”).

“Kill to Eat” is a good example of an autobiographical story (all “Stories from Stradbroke” are based on Oodgeroo’s memories of her childhood on the island) grounded

on the transformation of Noonuccal's life experience into first-person narrative. This epistemic process has entailed turning information acquired, stored, retained and, years later, retrieved by Oodgeroo, into words, thus interpreting nonverbal signs by means of signs of verbal sign systems.

Moreover, intersemiosis is evident in the combination of verbal signs and visual signs informing Oodgeroo's picturebook. In "Kill to Eat", Brownyn Bancroft's illustration features a stylised portrait of five figures holding a sling at the bottom, while at the top of the page are images of two typical Australian birds: on the right, the kookaburra and, on the left, a colourful parrot of the species *Alisterus Scapularis*. The colours, circles and lines that make up the design refer inter pictorially to the vibrant style of Aboriginal dot paintings. The story is an iconotext formed by words, images, and effects, playing on the interaction between different sign systems. The visuals support the verbal narrative, paralleling or expanding on what is said in words. On an intersemiotic level, it is also worth mentioning the importance of the auditory dimension. "Kill to Eat" is based on memorial and oral sources translated into writing and, like most children's stories, is designed to be read aloud by adults. Therefore, "sentence length and rhythm, repetitions and parallelisms, the presence of rhymes, alliterations, or other forms of sound patterning, and of course punctuation (which indicates to the aloud-reader when to pause or stop or take a breath) [...] even the visual appearance of the letters on the page will affect the way that the text may be read" (Bennett, 2021, pp. 1-2). Let us consider, for instance, the expression "(I was the third-eldest daughter)": how would an adult *perform* those parentheses?

Oodgeroo's translation work, however, plays out not only on the intermedial level, but also on the epistemological level. Epistemic translation has turned her stories from experiential, embodied, and emotional knowledge to its literary codification as children's literature (in Fig. 1, *ES1 to ES3b*). Not only has the author turned a specific episode from her own childhood into a written story, but she has also recoded some oral Aboriginal knowledge into a literary form. For instance, the Aboriginal rule according to which "our weapons were to be used only for the gathering of food. We must never use them for the sake of killing" is a central element in the story. The process of popularisation involves aspects related to the Noonuccal culture and the natural environment of North Stradbroke Island, where all stories are set.

In "Kill to Eat", Oodgeroo makes her life experience accessible to Indigenous and Non-Indigenous children, thus transmitting her own perspective and values to children and teenagers of all descent and extraction. To this aim, as observed, she employs plain English, the language of the invaders, as the lingua franca understandable by a global community of readers (Santos, 2016, p. 232). And if today Aboriginal cultures are often idealised as being opposed to Western culture, due to their archaic nature and their almost symbiotic relationship with nature, in Oodgeroo's story the point of view expressed is that of a child like any other, who lives with her family in a social context that, in many respects, resembles that of other children of her age. This "similarity" defeats the primitivist stereotype of authentic 'aboriginality', which portrays the Indigenous person as detached

from society and from other cultures (Gnecchi Ruscone, 1999, p. 188). Unveiling her own biography, thus, Noonuccal plays the role of intercultural mediator, searching for contact zones and developing new forms of cultural understanding and intercommunication useful in favouring dialogue.

3.2 Diamesic Resemiotisation

The second part of *Stradbroke Dreamtime*, titled “Stories from the Old and New Dreamtime”, contains Creation stories belonging to the Aboriginal peoples. It includes 14 Dreaming stories and tales based on the author’s knowledge of her people and the land. The English terms ‘Dreamtime’ and ‘Dreaming’ refer to a time-place where ancestral beings travelled the earth, singing and creating its topographical features; then they settled, shaping the territory, and tracing their ‘songlines’. In Oodgeroo’s “Stories from the Old and the New Dreamtime”, the author reshapes this spiritual background into a new narrative physiognomy, translating and transmitting in English knowledge of profound semiotic complexity, made of stories transmitted orally, also conveyed through drawings, music, and dance.

If one had to describe Noonuccal’s operation of translation and transmission with one word, reference could be made to the concept of ‘oraliture’, that is, the various genres of oral literature such as short stories, legends, proverbs, rhymes, and songs that present oral storytelling to us in the form of writing. With ‘oraliture’, orality is translated into written genres either in the form of transcription or of more or less complex literary expression (Petrilli and Ponzio, 2001, p. 99). Determined to take the narrative back and to create a work of authenticity to honour her people and land, Oodgeroo (1990, p. 8) based her own work on previous recordings of Dreaming stories as well as on personal research and memories of stories “told mostly at night around camp fires”. This transformation of oral knowledge into written narrative can be classified as a form of diamesic resemitisation involving the passage from one linguistic modality to another, i.e., from oral to written language (Petrilli, 2003, pp. 19-20; Gottlieb, 2018, pp. 49-51; Petrilli and Zanoletti, 2023, p. 345).

A clear example of ‘oraliture’ is Oodgeroo’s story titled “Mirrabooka (Southern Cross)”, included in the second part of *Stradbroke Dreamtime* (Figs. 4 and 5).

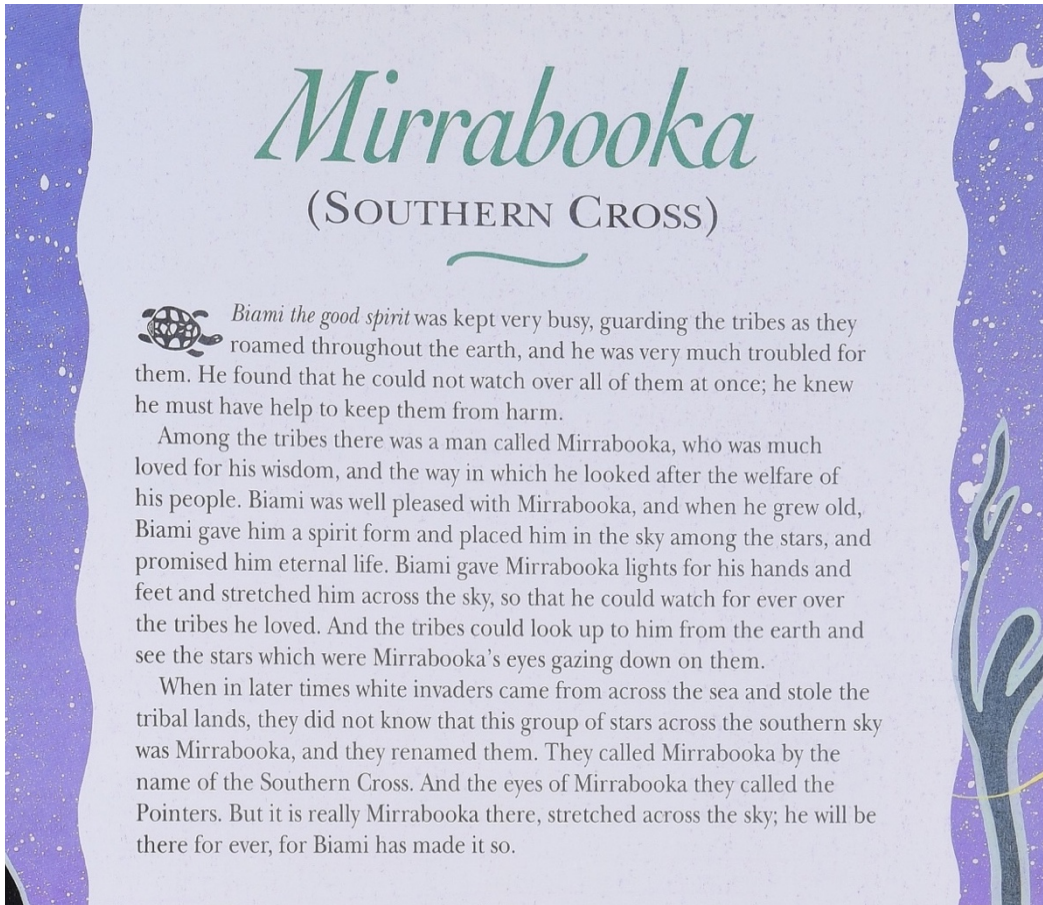


Figure 4. Oodgeroo N. (1999) *Stradbroke Dreamtime*, Sydney: Angus & Robertson, p. 67 (detail)



Figure 5. Oodgeroo N. (1999) *Stradbroke Dreamtime*, Sydney: Angus & Robertson, pp. 66-67

“Mirrabooka (Southern Cross)” is one of the many Aboriginal stories about the constellation in the southern hemisphere also known as *Crux Australis*, regularly used for navigation down through the ages by both European navigators and the Aboriginal peoples. Australian Aboriginals were probably some of the first human beings to name the celestial objects in the night sky: many of the star groups which we call constellations were divided and named by the Aboriginal populations thousands of centuries before ancient Egyptians or early Greek astronomers observed and named them (Bhathal, 2006, pp. 5-27).

The first part of “Mirrabooka (Southern Cross)” narrates how the Southern Cross came into being. In Noonuccal’s story, Biami, the creator spirit in the sky, was busy keeping an eye on the Aboriginal people, but found he could not watch them all the time and “knew he must have help to keep them from harm”.⁷ Therefore he chose a man named Mirrabooka, who was not only loved by everyone, but also looked after the welfare of his tribe. “Biami”, writes Oodgeroo, gave Mirrabooka “a spirit form and placed him in the sky among the stars, and promised him eternal life” and “lights for his hands and feet”, and stretched him across the sky, so that he “could watch for ever” over his beloved tribes. The tribes could gaze upward from the Earth, and behold the stars, which represented Mirrabooka’s eyes watching over them.

The second part of the story calls the white man (“white invaders”) into question and accounts for the name Southern Cross, relating it to the colonisers’ unawareness. In fact, the Southern Cross was first observed by Europeans only in the 16th century (Bhathal, 2006, p. 5.27). On the contrary, as Oodgeroo states peremptorily, “it is really Mirrabooka there, stretched across the sky; he will be there for ever, for Biami has made it so”. With this conclusion, Noonuccal links the past and the present, emphasizing that Aboriginal cultures possess a level of sophistication and knowledge surpassing common stereotypes.

In “Mirrabooka (Southern Cross)” translation takes place as a shift of signs from verbal to verbal. Assuming that Oodgeroo based her text on a pre-existing story passed down orally to her, such an intra-systemic passage has been activated in the diamesic transition from oral verbal signs to written verbal signs, “from an orally-based language-culture into a Western language-culture” (Bandia, 1993, p. 56; also Petrilli and Ponzio, 2001, pp. 98-109; Petrilli, 2017, p. 64). Or else, the author might have inferred the story from sources written either in an Australian language or dialect or in English, resemiotising the narrative into a format suitable to her audience. Epistemic dynamics also animate the relationship between the words and images in the story (Fig. 5), involving a transition between semiotic systems (Bennett, 2021, p. 3). Like “Kill to Eat”, also Mirrabooka’s story of is accompanied by a drawing that mimics, completes, and expands Oodgeroo’s writing, accentuating the bare poetic nature of her text.

On an epistemic level, Oodgeroo’s diamesic semiotisation activated in “Mirrabooka (Southern Cross)” implies both the translation of expert knowledge, such as astronomy, into a form that is accessible to a less specialised public (in Fig. 1, *ES2b to ES3b*, or *ES2c to*

⁷ In the spirituality of south-eastern Australia, Biami is the creator deity and sky father.

ES3b) and the transformation of a Dreaming story into children's literature. Oodgeroo fits the Creation stories of her people to the needs of any child or teenager. In fact, the heterolingual title "Mirrabooka (Southern Cross)" accounts for both the Aboriginal epistemology and the Western epistemology linked to the constellation.

Oodgeroo's "Mirrabooka (Southern Cross)", like all "Stories from the Old and New Dreamtime", preserves elements of pre-colonial memory and transmits them to a wide, potentially global audience. While employing a very simple and direct language, suitable for children, Noonuccal effectively conveys a message of profound semiotic complexity. Repetitions of the proper names "Biami" and "Mirrabooka" add emphasis. Paratactical syntaxis facilitates comprehension. With a fairy-tale style, Oodgeroo translates a corpus of knowledge, handed down orally from generation to generation, into literature written in English, mediating the encounter between the Western world and the teachings and wisdom of her people.

3.3 Imagetextual Synergy

Stradbroke Dreamtime is a picturebook designed for children. As observed previously, analysing the stories "Kill to Eat" and "Mirrabooka (Southern Cross)", illustrations translate the content of Oodgeroo's texts inter-systemically, transposing them in nonverbal signs. This occurs in all the different editions of the book: Dennis Schapel illustrated the first, while the 1982 edition features Lorraine Hannay's drawings, and the 1990s reissues contain Bancroft's illustrations (Walker, 1972; 1982; Oodgeroo, 1993; 1994; 1999). In all cases, the scenes of daily life, portraits, landscapes, and symbols portrayed in the drawings mediate the meaning of Noonuccal's texts, exerting an immediate sensorial impact on readers (Zanoletti, 2023, p. 245). When asked to explain her method, Bancroft revealed: "So, often, I'll read the text, maybe 50 times. Like, I've read it, read it, read it, and it becomes a part of me. So, when I'm doing the visual, you know, storytelling, it's so easy, 'cause I've actually kind of swallowed up the words and they're in my brain and it's very instinctive".⁸ According to Bancroft's description, the creative process presupposes an internalisation of the text; afterward, it is possible to recreate the stories visually in an intuitive way.

Transforming Noonuccal's textual stories into pictures is an intersemiotic phenomenon. This process, carried out by different illustrators in the different editions of *Stradbroke Dreamtime*, entails interpreting verbal signs by means of signs of nonverbal sign systems. Looking closely, for example, at the story titled "Burr-Nong (Bora Ring)", contained in the second part of the book (Figs. 6 and 7), one can spot several common elements in the text and design, as well as a few significant differences. Announced by the dual title "Burr-Nong (Bora Ring)", referring to a world vision which is very different to the Western vision (Vidal Claramonte, 2012, p. 273), Oodgeroo's story describes the training of Aboriginal young people, culminating, between the ages of 12 and 18, with a series of

⁸ Available at: <https://www.abc.net.au/education/interviews-with-australian-10-authors-ch-2-draw-with-bronwyn-ba/13581746> (Accessed: 15 May 2024)

“Burr-Nong ring” trials.⁹ Although initiation rules differ from Aboriginal culture to culture, typically bora ground comprised a larger circle and a smaller ring around. The former was a more public space while the latter was sacred and restricted to participants who were either the instructing elders or the initiants. As Noonuccal explains, “during the Burr-Nong training the boys are handed over to the men, and the girls to the women. They are taught the tribal secrets, and the art of manhood and womanhood.”

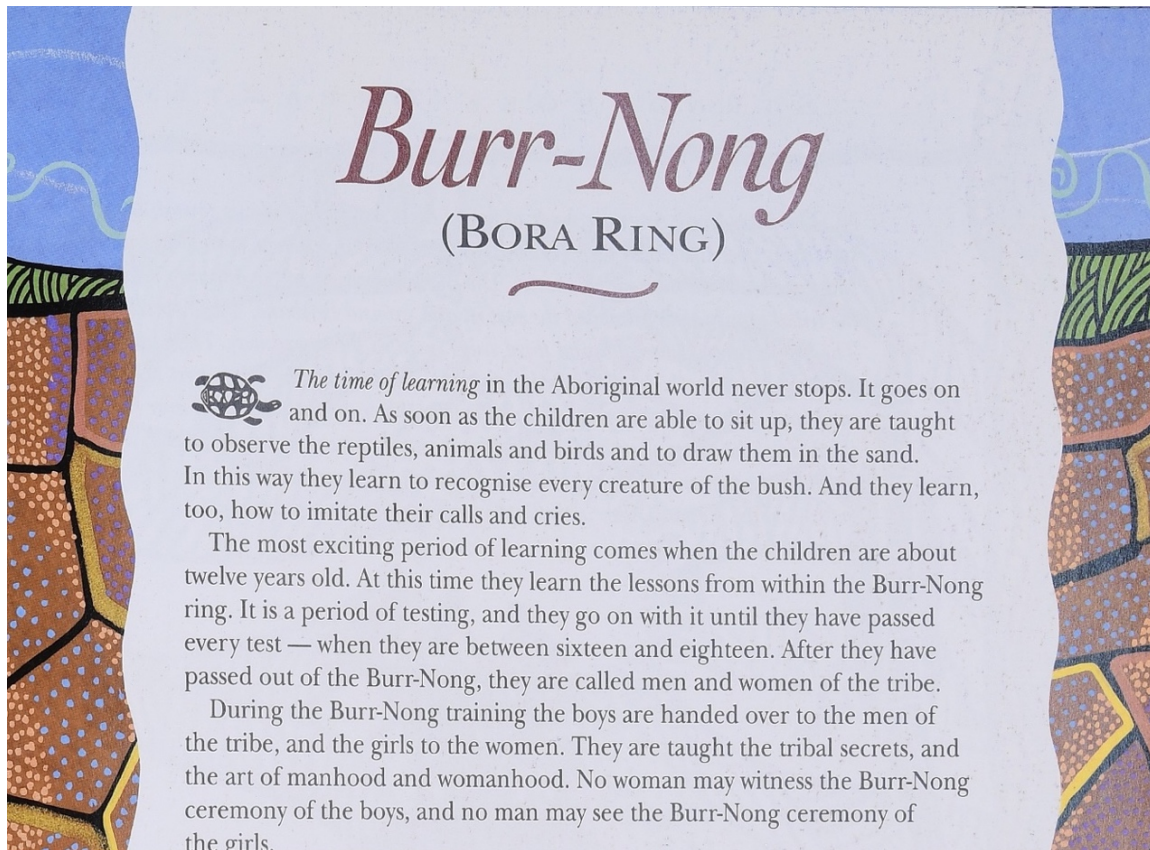


Figure 6. Oodgeroo, N. (1999) *Stradbroke Dreamtime*, Sydney: Angus & Robertson, p. 71 (detail)

⁹ The same theme is at the heart of Oodgeroo’s poem titled “Bora” and Judith Wright’s poem “Bora Ring”.

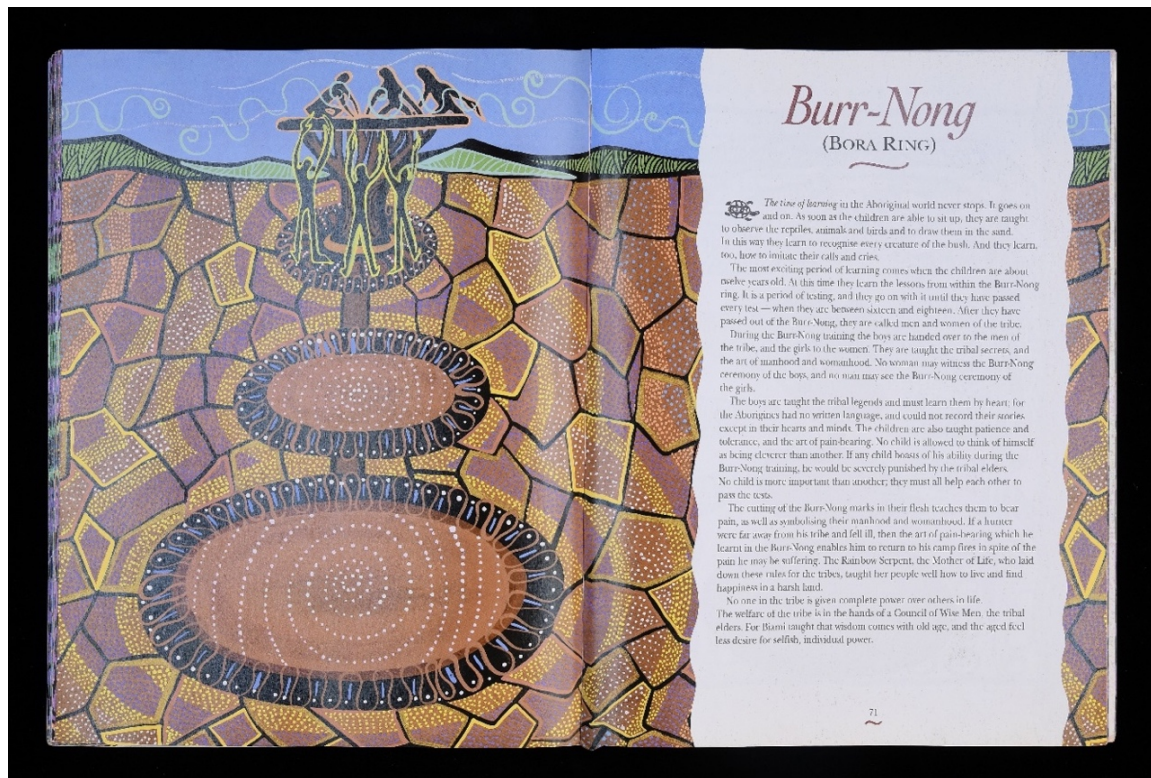


Figure 7. Oodgeroo, N. (1999) *Stradbroke Dreamtime*, Sydney: Angus & Robertson, pp. 70-71

While Oodgeroo's text dwells on the description of the bora ring, its meaning, functioning and values ("it is a period of testing, and they go on with it until they have passed every test"; "no child is more important than another"), the drawing emphasises the physical context of the trials, completing the information provided by the writer. The illustration depicts two Burr-Nong, one larger and one smaller, and next to them, a third bora with a large tree and six human figures: three males, and three females. The landscape is drawn in a stylised form: we see clods of earth and, in the distance, low green hills and a windswept sky.

The process of turning the spiritual beliefs and worldview of the Indigenous society into an illustrated story targeted to children is also a form of translation from one incipient Epistemic System (ES) to a subsequent one (in Fig. 1, the trajectory *ES1 to ES3b*): it is a process transforming knowledges from Southern cultures into forms that are meaningful in the North (Bennett, 2024b, p. 13). In "Burr-Nong (Bora Ring)", for instance, Oodgeroo reframes the Aboriginal knowledge as a narrative in a different semiotic world, recoding concepts and information into a children story. She reworks knowledge of the ancients in accordance with new cultural and ideological configurations, adapting and transforming (Robinson, 2017, p. 22). Such movement is a process of popularisation of specialist contents and meanings related to the Indigenous culture and worldview in terms not only of reverbalisation, but also visual recoding.

And whilst for millennia, the Indigenous peoples of Australia have experienced their stories in terms of action/performance, in contrast with the Western view that sees stories as texts (Gnecchi Ruscone, 1999, p. 182), illustrations in "Burr-Nong (Bora Ring)" should be

also viewed as part of a translation strategy crucial to the full representation of meaning, as they intersemiotically evoke the pictorial and performative aspects inherent in the Aboriginal storytelling. From this viewpoint, images can be seen as a performative device encouraging interaction, facilitating comprehension, and expanding the audience on a global scale, supporting Oodgeroo in her mission to bring the knowledge of her people to the attention of the West.

4. Conclusions

As this analysis shows, *Stradbroke Dreamtime* is imbued with translation. The memorial dimension of Oodgeroo's "Stories from Stradbroke", the transformation of oral, performed, and written sources into her "Stories from the Old and New Dreamtime", and the interactions between verbal and non-verbal elements, all these are translational aspects. Autobiographical writing, diamesic resemiotisation, and imagetextual synergy cooperate in giving shape to a literary work that provides children and adults of any background a sense of Oodgeroo's own experience and values. With *Stradbroke Dreamtime*, while playing the role of a negotiator between two worlds, the author taught Australians about their cultural heritage, and at the same time made these teachings accessible to all English-speaking readers, in an intergenerational and inclusive way.

Underlying this analysis is a notion of translation stretching beyond that of interlingual transposition—although it also considers this phenomenon—towards a broader, semiotic conceptualisation that involves (inter-) epistemic aspects. Translation is viewed here as a process of creating and disseminating knowledge – as a dynamic cluster concept with the potential to explain how things change through the modelling of the new upon the old, and as a central metaphor for any situation where we try to relate meaningfully to difference and alterity (Robinson, 2017, p. x; Bennett, 2023, pp. 444 and 456; Santos, 2016, p. 215). From this perspective, the twofold aim of this study has been to contribute not only to unveiling the translational character of *Stradbroke Dreamtime* as a key feature of Noonuccal's work, but also to challenging the perimeter of inquiry of Translation Studies, opening it up to new conceptions that embrace all forms of communication far beyond the merely literary and linguistic. Translation is poised to become, as forecasts Bennett (2024a, p. 11), an important operative tool in a new transdisciplinary research paradigm and, as advocated in this study, a powerful lens to interpret Indigenous cultures in new and fruitful ways.

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HYSTERICAL TRANSLATION: AN INTEREPISTEMIC EXPLORATION BETWEEN DELEUZIAN AFFECT THEORY AND THE *QI* THEORY IN TCM

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ABSTRACT: Hysteria has always been a heatedly debated topic in both the medical and the non-medical arenas with around four thousand years' history. However, the different ways it has been translated into Chinese are all barely satisfactory from the perspective of interepistemic translation since they haven't fully explored the translationalities between the epistemic regimes of East and West. In this paper, the author proposes a counter-hegemonic Western regime that shares quite a few convergences with the Chinese regime based on *qi* theory. The author translates interepistemically between Gilles Deleuze on hysteria in *Francis Bacon: The Logic of Sensation* ([1981] 2003) and the *qi* theory in traditional Chinese medicine and argues that the Deleuzian conception of affect channels a lot of convergences, theoretically and philosophically, with *qi* in TCM, as both are vibrant, dynamic, and evolving destabilizing and restabilizing forces that always break through fixed organisms and boundaries.

KEYWORDS: Hysteria; Gilles Deleuze; Traditional Chinese Medicine; *Qi* Theory; The Body Without Organs

1. Introduction

One of the commonest memes dominating discourse regarding China and the West is that the two civilizations are radically different epistemic systems. Orientalist stereotypes would insist that the West is scientific, and the 'Orient' is mystical. The West is individualistic, China collectivistic. The West is scientifically reductivist, China philosophically emergentist, ecological. And so on.

In this paper I begin by introducing a Western diagnosis of a psychological disorder—hysteria—that is about as far from Chinese thought about psychological dysfunctionality as one can imagine, and the resulting difficulty of translating 'hysteria' into Chinese interlingually—and then move into an interepistemic translation between Chinese *qi* theory and a remarkably convergent Western reframing of hysteria.

2. Previous attempts to translate hysteria into Chinese

In his *Approaching Hysteria: Disease and Its Interpretations*, Mark Micale calls hysteria "arguably the oldest and most important category of neurosis in recorded medical history" (1995, p. 3). The 'disease' has elicited heated discussions and debate for thousands of years, from Hippocrates in ancient Greece to Jean-Martin Charcot, Sigmund Freud and Josef Breuer in their nineteenth and twentieth-century histories of hysteria. Henri Ellenberger, a Canadian psychiatrist and medical historian, even once commented that "One could say that the history of modern dynamic psychiatry originated entirely with the study of hysteria" (1961, p. 283). That might be a slight exaggeration, but it clearly underscores the significance of this 'disease' in medical history.

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Outside the history of medicine, too, hysteria has, over the centuries, inspired numerous scholars spanning the fields of literary history and criticism, gender studies, art history, cultural studies, psychoanalysis, discourse analysis, sociology, etc., to generate new thoughts. As a result, the disseminated meanings attached to the term have been accumulated to an almost unbearable point where, as Michel Foucault says, “Things themselves become so burdened with attributes, signs, allusions that they finally lose their own form. Meaning is no longer read in an immediate perception, the figure no longer speaks for itself” (2001, pp. 18-19). Hysteria can no longer be viewed only as a naturally occurring pathological entity, for it is overdetermined with too many historical, cultural, sociological, and metaphorical implications.

The most prevalent translations of the term ‘hysteria’ in Chinese are perhaps *xie si di li* 歇斯底里 and *yi zheng* 癡症 — the latter so commonly used that most Chinese might not even realize that it’s a loanword. The former translation *xie si di li* is apparently a transliteration in accordance with the English pronunciation of hysteria /hɪˈstɪəriə/ (some also argue that *xie si di li* is actually a relay translation from the Japanese transliteration ヒステリー — /Hisu teri/ from English in the Meiji era). The latter, *yi zheng*, is a relatively more liberal translation, literally meaning “mind disease”; it is used much more often in medical contexts.

3. Translationality and Interepistemic Translation

This kind of translation of a name for a disease is ultimately not a purely interlingual problem, but an interepistemic one. The medical epistemes in China and the West have historically been strongly divergent, and translating between them is really much more interepistemic than interlingual.

In his 2017 monograph *Translationality: essays in the translational-medical humanities*, Douglas Robinson, for the first time, put forward the concept of ‘interepistemic translation’. As the name suggests, interepistemic translation refers to the translation from one epistemic system, or knowledge system, to another. According to Robinson, “It is similar to ... *translatio studii*, the translation of learning, also known as the transfer or transmission of knowledge – which is never a ‘cloning’ of knowledge, of course, but always involves what I’m calling *translationality*: adaptation, *transformation*” (2017, p. 200, emphasis added). In textual context, translationality, the core of interepistemic translation, refers to the relationalities between the source text and target text. But such relationalities are not only about written texts (objectivity), but also *felt experience* (subjectivity). In other words, Robinsonian translationality is never about the passive transmission and acceptance of rigid knowledge, but a (felt-becoming-mobilized-becoming-performed) (peri)performativity that we co-perform with our bodies in constant and ever-changing embodied interactions with others. He writes:

Translationality as transformationality: the constant emergingness of everything, through embodied, situated, performative interactions. ... We exert pressure on ourselves and others

to bring our shared feelings into some kind of “neurocultural” organization, which, we hope, will increase predictability and so homeostatic control over our environments and ourselves. And then we periperform that organization, not only on the world’s stage, in situated/distributed social interactions staged as full-body movement in space and time, but on the body’s stage as well, in social interactions staged as expressive/receptive/mimetic body language. We periperform social organization by organizing social performance, and in so doing periperform social organization. This is the continual reciprocal/ reticulatory through-put of periperformative social regulation. (2017, pp. x-xi)

Any group’s epistemic regime would be the ‘neurocultural organization’ members (peri)perform every day, the organization that was shaped by, has shaped, and is still shaping the group’s construction and experience of the entire world, and also its members’ bodies. To this extent, what interlingual interepistemic translation engages would be how the target reader’s sense of ‘the right word or phrase’ or ‘equivalence’ between the source and target texts is organized neurologically so as to fit into their unique epistemic regime, and how the translator can learn and feel something like that neurological model in order to make their translation fit in with the epistemic regime. To put it in a simple way, the two epistemic regimes of the target knower and source knower are quite different, which means they know/experience/construct the world in different ways, but an interepistemic translator can track those differences and find the potential convergences in-between while translating.

From an interepistemic point of view, neither *xie si di li* nor *yi zheng* can be counted as a good translation—which is to say that translating them interlingually and not interepistemically doesn’t work. The transliteration *xie si di li* is nothing but a passively blind accepting and phonetic mimicking of its English original, whereas the latter one, *yi zheng*, might also be a rather lazy translation: simply describing what kind of disease the English original is about. Both fail to construct the periperformative interactions between the Eastern and Western epistemic regimes.

What, then, can be counted as a more Robinsonian interepistemic translation? An apparent answer might be, first of all, to look for the philosophical and cultural differences and convergences between the two, especially the latter, so as to seek a middle ground and also an affective connection point in-between for readers from both epistemic regimes to explore and feel the translationality as transformationality. Some might argue that that is easier said than done: given the deep and complicated differences between the Western epistemic regime and the Chinese regime and the difficulty of translating interepistemically between the two, how exactly can we locate a philosophical and cultural convergence point? It would certainly be hard if we only focused on hegemonic Western philosophies, namely the traditional metaphysics that the West has inherited from Plato in ancient Athens. But if we look at the periphery of Western philosophy, or I would call ‘the abnormal Western philosophy’, there is a sequence of philosophers from Anaximēnēs to Deleuze who are carving out what I would call a Western counter-hegemonic epistemic regime that might serve as a breakthrough channel for East-West interepistemic translationality.

4. Theoretical encounters between East and West

The most remarkable distinction between the Western hegemonic and counter-hegemonic philosophies that I'm about to introduce here is the former's fascination with binary oppositions, i.e. reason and unreason, body¹ and mind, ideality and reality, always honouring one pole and banishing the other. In the case of hysteria, for example, this 'disease' as the culture-based pathological stigmatization of the female *body*—specifically of the female reproductive organs—was based philosophically on the Platonist binary poles of the filthy body and the noble soul. As Plato notes in his *Phaedo* (*Φαίδων*),

For the body is a source of endless trouble to us by reason of the mere requirement of food; and by filling us full of loves, and lusts, and fears, and fancies, and idols. ...and all experience shows that if we would have pure knowledge of anything we must be quit of the body. (translation by Benjamin Jowett, [1980] 2002, p. 12).

To Plato the body is insignificant, filthy, and disgraceful. As the container for affections, desires, and passions, it represents the negative qualities of unreliability, instability, and pretentiousness that must be repressed and expelled from *The Republic*. His denigration of the body and promotion of binary opposition has influenced the West for thousands of years where the body was and maybe still is repressed for its excess sensitivity and emotionality that run counter to the 'normal' logocentrist philosophical tradition.

What would an 'abnormal' Western philosophy be like, then?

4.1 *The Western counter-hegemonic epistemic regime and the Chinese regime*

Anaximēnēs (Ἀναξίμηνης, 585-525 BCE) is believed to be the third philosopher from the pre-Platonic school of Miletus, who, I argue, might be the very beginning of this 'abnormal' Western philosophy. Anaximēnēs believed in material monism where materials of all things are derived from one class of matter, or 'the source'. According to Theophrastus:

[For Anaximēnēs] the underlying nature is single and boundless ... calling it *air*. It differs in essence in accordance with its rarity or density. When it is thinned it becomes fire, while when it [air] is condensed it becomes wind, then cloud, when still more condensed it becomes water, then earth, then stones. Everything else comes from these. And he too makes motion everlasting, as a result of which change occurs. (quoted in Graham, pp. 2-3, emphasis added)

Anaximēnēs believed that everything was derived from air and that there was no creating or perishing in this becoming process, but only *altering*. Such air-based monist thinking resonates strongly with ancient Chinese 气 *qi* philosophy, which has exerted a huge influence over Chinese thinking for millennia, ranging from cosmology and philosophy to culture and medical theory: there too *qi* (often translated as air, vapor, breath, vital

¹ For different approaches to the body as a concept see: Hibbs, S., Serban, A. and Vincent-Arnaud, N. (2018) and Federici, E. and Parlati, M. (2018).

energy, etc.) is regarded as the origin of all things. In chapter 42 of the *Daodejing*, Laozi ([老子, 571-471 BCE]) says:

The way [道 *dao*] begets one;
one begets two;
two begets three;
three begets the myriad creatures.
The myriad creatures carry on their backs the yin and embrace in their arms the yang and are the blending of the generative forces of the two. (D. C. Lau's translation)

The core of 道 *dao* (the way) is 无 *wu* 'nothingness/emptiness', where 有 *you* 'having' is born. It has no name, no shape, no sound, no action, no goal, no intention. Yet it integrates *yin* and *yang* in chaos, the two opposing principles in nature, which mother all things. Laozi's later follower Zhuangzi (庄周, 369-286 BCE) extends Laozian Daoism by implying that *dao* actually is *qi* — both representing the infinity of time and space — for the state of nothingness of *dao* is *qi*, which is exactly, as mentioned before, the core of it. According to chapter 22 of the *Zhuangzi*:

Life is the companion of death; death is the beginning of life. ... Man's life is a coming-together of breath [*qi*]. If it [*qi*] comes together, there is life; if it scatters, there is death. ... The ten thousand things are really one. ... So it is said, You have only to comprehend the one breath [*qi*] that is the world. (Burton Watson's translation)

In other words, the "one" in chapter 42 of *Daodejing* is actually just a certain state of *qi*, which, once achieved, is able to "beget" all things. In other words, when Laozi says "the way [*dao*] begets one", it's not so simple as *dao* creating or becoming *qi* or *dao* equaling *qi* completely; instead, it's that *dao* somehow reaches nothingness/emptiness, one certain state of *qi* (also the core of *dao* itself), and then all the transforming and becoming processes begins. This sounds very similar to Anaximēnēs' air theory: Anaximēnēs' air is capable of being altered into the six main materials (i.e. fire, wind, cloud, water, earth, stone) before transforming into everything else, whereas at first Daoist *qi* evolves into *yin* and *yang* in chaos, which are then capable of transforming themselves into all things. *Qi*, or air, is the destabilizing and evolving forces that carry the potentiality to be transformed into all kinds of materials. This process is full of indeterminacies and complexities and therefore cannot be stabilized and fixed: *qi* and air is both everywhere and nowhere.

It seems miraculous that Anaximēnēs came up with such a pre-Platonic theory that shares so much in common with his near-contemporary Laozi and the later Zhuangzi. Since then, unfortunately, the Western philosophical tradition had been dominated by Platonist dualism, which suspended the traces of this 'abnormal Western philosophy' for a long term until Benedictus de Spinoza developed something like it in the 17th century by putting forward his philosophy of affect² theory.

² For additional discussions of somatic translation see: Robinson, D. (1991, [1997] 2003, 2023).

Arguing against Descartes' dissection of reason and emotion, or the mind-body binary that is paradigmatic in the Western philosophical tradition, Spinoza conceptualized the term 'affect' in his *Ethics*. In order to subvert the Cartesian mind-body dualism he submitted that affect should never be deemed as a flaw in the human being, for all emotions, just like all creatures, are originated from the power of 'Nature'.

In Spinoza's terms, affect cannot be simply counted as an expression of human emotions; it also points to inter-bodily interactions, passively or actively, and such interactions will strengthen or reduce the power of the body and also, naturally, generate changes of emotions. Liu Qianyue in her 2018 article *The Genealogy of Affect Theory* explains that:

In his *Ethics*, Spinoza believes that affection, or the inter-bodily interactions, will enhance or reduce the forces within the body and thus exert influences on the changes of affects. He never meant to measure the various states of things nor provide criteria for anything, good or bad, strong or weak, high or low. What he was interested in is the movement and transformativeness from one state to another ... and hereby define what the body means. (p. 204; my translation)

In other words, Spinoza regards affects, positive or negative, as the changes in an individual's power that happen during the body's interactions with other bodies, where the interactive body-mind relationship is closely associated with feelings and emotions. The body, therefore, can be defined by its transformation and movement from one state to another and the intensity and power involved therein. And affect is the becoming of such intensity; it is dynamic, fluid, and transformational.

In this way, Spinoza, insofar as I have been able to determine, was the first to shatter the logocentric mind-body binary opposition by means of his 'affect monism' — drawing the attention of the world into the power and dynamicity of the body as a whole. His affect theory is further developed by later philosophers like Gilles Deleuze, Félix Guattari, and Brian Massumi. Among them, Deleuze might be the most influential one. While in the process of his rethinking and extending of Spinoza's affect theory, Deleuze was also strongly influenced by anti-Platonist Nietzsche.

Friedrich Nietzsche, born two hundred years later than Spinoza, chose to draw attention to the body and the *power* therein as his retaliation against Platonic logocentrism. In *Zarathustra*, he refers to the body, or the self, as the hub of an aggregate of vital forces that are displayed as instincts and emotions. Nietzsche also despises the logos-based Western metaphysics and people's belief in imaginary realities. Such metaphysical traditions are nihilistic to him, since they totally deny the 'true self' of human being: the body. In terms of this theory of body as the ceaseless striving of the forces, Deleuze comments in his *Nietzsche and Philosophy* that:

What defines a body is this relation between dominant and dominated forces. Every relationship of forces constitutes a body — whether it is chemical, biological, social or political. Any two forces, being unequal, constitute a body as soon as they enter into a

relationship. This is why the body is always the fruit of chance, in the Nietzschean sense, and appears as the most “astonishing” thing, much more astonishing, in fact, than consciousness and spirit. (Deleuze, [1983] 2002, p. 40)

In Spinoza’s or Deleuze’s terms we might speculate that what Nietzsche means by the power in the body is the intensities and forces enabled and energized by affect. The body, full of passions and intensities, is always in flux, and this changeability always involves the process of struggling and becoming, which is exactly realized by the vital forces within: those “dominant and dominated” forces stir the body and create inner energies, thus generating the emotional intensities and passions in turn. Apart from this, for Nietzsche, there’s nothing left.

The perspective brought by Nietzsche from the 19th century to a large extent helps to shape Deleuze’s philosophical rethinking on the body and the forces from inside and outside, and thereby his extension and development of Spinoza’s pioneering affect theory in this ‘affective turn’ in Western humanities. As a result, Gilles Deleuze, altogether with Guattari, later developed their philosophy of ‘becoming-revolutionary’ that focuses on the positivity of affect.

He starts by pointing out various French translation mistakes from Spinoza’s *Ethics* in Latin, among which the biggest one might be that the French translator didn’t distinguish *affectio* from *affectus* and translated both as affection. Deleuze further argues that it might be better if *affectus* was translated as affect while *affectio* was affection and thus draws a distinction between affection and affect. Affect is a passion, referring to the continuous variation of one’s forces of existing and acting, the increase or decrease of power, which have to be recognized and determined by one’s ideas. The affection of the body, on the other hand, is a status, relying dependently on its interactions with at least one other body. The affect ‘envelops’ and ‘implicates’ the affection and is never dependent on the latter. To Deleuze, the affect is the becoming, transforming, and constant moving of the body and its autonomy rather than the become, transformed, and moved body. The affection ‘executes’ and ‘realizes’ the power of body as perfectly as it can but it can never do it without the kinetic increasing and decreasing of the body.

The body is capable of being affected and is “defined by a certain power of being affected” (*ibid.*). Such power, to Deleuze, is “an intensity”—a quantity of power, or “threshold of intensity”—and is able to be ‘fulfilled’. To explore how to reach such fulfilledness, he puts emphasis on the positivity of affect, calling it “the labor of life” that is full of potentialities and possibilities because those active or positive affects, like joy, can form a common notion, which is “a perception of a common relation, a relation common to me and to another body”:

The common notions are not abstract, they are collective, they always refer to a multiplicity... The common notions or the relations which characterize me still concern the extensive parts of my body. (1978, Lecture Transcripts)

It is through such common notions, Deleuze argues, that “I will not cease to pass via these variations of the power of acting as a function of the ideas I have” and “to follow the line of continuous variation of the *affectus* as a function of affection-ideas that I have”; In such a way, he says, “my power of being affected is completely actualized, completely fulfilled” (*ibid.*).

Among this series of abnormal Western philosophers, Gilles Deleuze, as a successor to Nietzsche, is perhaps the philosopher most influenced by Chinese thought. In *A Thousand Plateaus*, for example, Deleuze and Guattari directly integrate *dao* into their own philosophical conceptions of immanence and deterritorialization by arguing that “an intensive body without organs [BwO], *Tao* [*dao*], a field of immanence” constitutes “a plane of consistency proper to desire”, which is part of “the totality of all BwO’s, a pure multiplicity of immanence” and “all in movement of generalized deterritorialization” ([1980] 1987, p. 157). To Deleuze, “A plateau is a piece of immanence. ... Every BwO is itself a plateau in communication with other plateaus on the plane of consistency. The BwO is a component of passage” ([1980] 1987, p. 158).

In other words, the body without organs (which will be discussed in detail in the next section) is defined by its intensive interactions with various plateaus on the plane of consistency where the BwO, like a nomad, can flow freely in all directions without the restriction of organisms. Deleuze regards *dao* in early Chinese philosophical tradition as one example of this kind of plane because that tradition is different from hegemonic Western metaphysics. It can be said that, in doing this, Deleuze must have noticed the power of becoming and evolving contained in *dao*. In other words, formed on the basis of *qi*, the Daoist body is dynamic, interactive, transformative, and deterritorialized, just like the Deleuzian BwO.

Therefore, in a manner of speaking, the counter-hegemonic philosophers as discussed above, from Spinoza to Deleuze, all share convergences with and/or have been influenced by the Chinese epistemic regime, especially Daoism and the *qi* theory, which might make interepistemic translationality possible between the East and the West.

4.2 On Hysteria: Deleuze and TCM

Let us now go back to the translationality of the term ‘hysteria’. As I mentioned above, locating the interepistemic translationality of hysteria would mean to explore the connecting point(s) between the neurocultural organizations of the source knower and the target knower in order to build a bridge between them. In this case, then, the question would be: Is there any theory in the Western epistemic regime that can theorize ‘hysteria’, pathologically, metaphorically, and philosophically, in a way that fits into the Chinese mind so as to pave the way for potential interepistemic translation? In terms of the ‘tree-structured’ hegemonic Western philosophy the answer might be *no*; but what if we take the ‘abnormal Western philosophy’ above into consideration, which shares so many convergences with early Chinese philosophy?

This leads us to the next section: Deleuzian affect theory and his conceptualization of the body without organs and the *Qi* theory in traditional Chinese medicine (TCM). Specifically, we'll look into Gilles Deleuze's reframing the Western hegemonic pathological understanding of hysteria as something else and the convergences it shares with the philosophical system and pathological mechanisms of TCM before trying to draw corresponding implications for interepistemic translation practice and studies.

4.2.1 Deleuzian affect theory, hysteria, and the body without organs

Like Foucault, Deleuze also pays attention to the so-called bodily madness which is commonly believed to be derived from psychiatric disorders such as schizophrenia and hysteria—though what interests Deleuze most is actually the philosophical implications lurking behind such “madness” rather than mere clinical manifestations. Deleuzian schizophrenia and hysteria are not mental diseases in the strict sense of pathology; instead, they're more like Nietzsche's Superman or Foucault's deranged madmen in the *Narrenschiff* or 'ship of fools', representing a fully liberating and decentralized spiritual state that enables to body to escape from the sphere of Oedipal totality (see Deleuze and Guattari's *Anti-Oedipus* ([1972] 2004).

How exactly does that work? To answer this, we'll need to look into an essential Deleuzian development in his *Francis Bacon: The Logic of Sensation* ([1981] 2003) of the body without organs.

The phrase 'body without organs' was first deployed by the French playwright and poet Antonin Artaud in 1947. Deleuze further theorizes that it's not that the body has no organs, but rather that there is no organism, no organization or structure of organs ([1981] 2003, p. 45):

It [BwO] is an intense and intensive body. It is traversed by a wave that traces levels or thresholds in the body according to the variations of its amplitude. ... a wave moves through it and traces levels upon it; a sensation is produced when the wave encounters the forces acting on the body.... When sensation is linked to the body in this way, it ceases to be representative and becomes real. ... the wave flows through the body; at a certain level, an organ will be determined depending on the force it encounters... . In short, the body without organs is not defined by the absence of organs, nor is it defined solely by the existence of an indeterminate organ; it is finally defined by the *temporary and provisional presence* of determinate organs. (pp. 44-48, emphasis in original)

Apparently, what is opposed to the body without organs is the body with an organism. The Deleuzian body without organs is always in the process of becoming and can only be temporarily defined by the interaction, or the 'encounter', between the wave flowing through the body and the force acting on the body from the outside. The organs are provisional because they have no clear boundaries, fixed functions, or predictable duration of existence—the duration of their existence depends on the intensity of the waves and forces. That is, the organs are present only when such interactions happen and

would dissipate when the waves and/or forces are displaced or removed or the magnitude of which changes.

If we bring Deleuze's affect theory to bear on the theorization of the body without organs, affect would be the continuous changes in the power contained in the process of becoming and dissipating of the organs in the body. As we've discussed before, what *affect* unfolds is that the influences and forces exerted from interactions with other bodies (the outside) are becoming and transforming into the body; *affection* by contrast would be the 'become', transformed, and moved body—a status. In this sense, arguably we can say that those ever-changing temporary and provisional organs constitute the affection of the body at any particular moment, whereas affect represents the continuous changes of the body's power of existence itself. Affect as power circulates through the body, determines 'the temporary and provisional presence' of organs and in this way defines the body in turn.

What then does hysteria, or the hystericity of the body, mean to Deleuze? To Deleuze, such a complete series of the body without organs, specifically from 'without organs' to 'the indeterminate polyvalent organ' to 'temporary and transitory organs', precisely constitutes "the hysterical reality of the body"—and Francis Bacon's painting can represent such hystericity without deferral or delay (p. 48):

If we look at the "picture" of hysteria that was formed in the nineteenth century, in psychiatry and elsewhere, we find a number of features that have continuously animated Bacon's bodies. First of all, there are the famous spastics and paralytics, the hyperesthetics or anesthetics, associated or alternating, sometimes fixed and sometimes migrant, depending on the passage of the nervous wave and the zones it invests or withdraws from. ... Next, there is the transitory character of the organ's determination, ... Next, there is the direct action of these forces on the nervous system, as if the hysteric were a sleepwalker. (pp. 48-49, emphasis in original)

This is probably why Deleuze uses Bacon's painting as the example—Bacon drew out the 'sensations', the purest and most direct response of the body when internal nerve waves and external forces encounter each other in it. In other words, he drew out both the flesh of the hysterical figure and the intensities of or the invisible forces beneath such hystericity. The invisible forces are channeled through the flesh and in this way make the flesh and bones twisted, tumbled, folded, and undulated. The body loses its centrality and territoriality and therefore becomes turbulent and chaotic. This is why Deleuze said the hystericity of Bacon's figures is always present without mediation: he drew out the body of becoming.

Therefore, we might be able to say that what makes the organs dysfunction, deform, and displace *are* those invisible forces; the body without organs is the body flooded with forces and intensities, or with affect in general, which breaks through the confinement of the organism and hierarchy and infuses the body with vitality and endless potentialities. To this extent, it seems like Deleuzian hystericity is ubiquitous among all bodies without organs. In other words, hysteria is the exact outward manifestation of a body without organism. This might be the fact of hysteria to Deleuze.

4.2.2 *Qi theory in TCM*

No Chinese is a stranger to *qi* theory, even in the current modern world. When we feel sick, feeble, and tired, friends or family members around us might say: “your *qi* is deficient”. When we are agitated and temperamental, they might say: “your *qi* is too exuberant.” It seems like *qi*-related discourse is so commonly used that it has become an indispensable part of Chinese life—so common that the majority of Chinese people have never even thought about what exactly its nature is or where it originates. In other words, the connotation and extension of the concept of *qi* is so rich that there is no precise definition nor interpretation of *qi* in history, but only descriptions and arguments in various classics.

According to Zhao Jichao’s *Qi Theory and the Academic Development of Traditional Chinese Medicine* (2020),

In traditional Chinese culture, ... non-philosophically speaking, *qi* as a commonsensical concept refers to any existence in the gaseous state, such as steam and cloud, and also any phenomena in a broad sense, including spiritual phenomena. Generally and philosophically, *qi* is often related with ontology. (p. 142, Chinese original, my translation)

Zhang Dainian, a Chinese historian of philosophy, commented in 2017 that *qi* in Chinese philosophy refers to the most minute, refined and fluid matter and is believed to be the foundation of all things. In this sense, *qi* might be the most fundamental theoretical conception in ancient China. It has exerted influences on various schools of early Chinese thought such as Confucianism, Chinese Buddhism, Daoism, Chinese Medicine, etc., and also literature, culture, and art. Speaking of the doctrinal source of *qi* theory in traditional Chinese medicine specifically, the *Huangdi Neijing* (lit. the *Inner Canon of the Yellow Emperor*) might be the epitome and will be the main theoretical underpinning of TCM in the following sections. It pays considerable attention to the movement of *qi*, or so-called *qihua*, the becoming and transforming of *qi*.

Chen (2012) concludes that from the medical point of view the *Huangdi Neijing* divides *qi* into four categories: the *qi* of nature, the *qi* of the human body, the *qi* of food and medicine, and other kinds of *qi*. Since, as we mentioned before, *qi* as the basis of all things is empowered with the destabilizing and restabilizing forces and therefore carries the potentiality to be transformed into all kinds of materials and ‘myriad creatures’ and to channel the movements of all things, it is very important to note that such categorization is never an insuperable structural confinement of *qi*; instead, the *qi* that belongs to one group at present might evolve and transform into another category in any moment. *Qi* is both everywhere and nowhere; it constitutes and connects everything.

To take the human body as the example, as we discussed in 4.1, *qi* can be philosophically divided into two genres: (the *qi* of) *yin* and (the *qi* of) *yang*, two reciprocal forces in constant motion and transformation that carry antagonistic yet complementary attributes. ‘The myriad things’ are generated from the interactions between *yin* and *yang* and among them, humans are formed by the ‘refined’ kinds of *qi*. However, the *qi* that constitutes the body, or the shape, is derived from the Earth (which means it carries earthy

characteristics like heaviness, turbidity, and coarseness) whereas the *qi* that forms the spirit, or the mind, is derived from the Heaven (which carries the characteristics like lightness, emptiness, and ethereality). The body and spirit are not a Platonic binary where the latter is superior to the former. Instead, it is the transformation of *qi* that provides vital energy for all human activities and thus motivates the changes of the mind and spiritual phenomenology. And all energies are equal: feelings, emotions, and perceptions are separated from yet not more elevated or degraded than thoughts, concepts, and logic. The body and the spirit are differentiated yet co-dependent; the former provides the physical base for the latter to cultivate itself and generate various kinds of thinking activities whereas the latter nourishes the former to ensure its normal functioning.

In this way, it seems reasonable and natural that humans are in connection and constant resonance and interactions with the world: They are all formed by one substance, which is invisible yet all-pervasive and always in motion and transformation (*qihua*)! And in the process of humans' participating in *qihua*, the body acts both as a utensil filled with fluid and transformative forces, or *qi*, and a mediator with non-enclosed and unfixed boundaries that allows the exchange and circulating of *qi* between the internal body and the outside world.

What is worth noticing, however, is that although the *qi* of the human body is in constant interactions with itself and the outside world, its transformations must be homeostatic and balanced dynamically as a whole; otherwise, the general state of harmony in *qi* would be broken and the body would suffer from diseases. As Chen Xi concludes the etiological factors and mechanisms of *qi* on diseases mentioned in the *Huangdi Neijing*,

The various factors of etiology mentioned in the *Neijing* are really all about the deficiency of the righteous *qi* [*zheng qi* 正气] in the body and the invasion of the evil *qi* [*xie qi* 邪气] from the outside. In different periods of time, the transforming and moving statuses of *qi* are different, which beget different "tendencies" [*shi* 势] and thus generate different "agents" [*yin* 因]. If a person is sick because of the agent, then this agent becomes the pathogenic factor. ... The evil *qi* refers to any pathogenic factors [in TCM]. ... However, just the evil *qi* is not enough to make people sick: as we say, "when the righteous *qi* is sufficient in the body, it can protect the body from the evil *qi*." Therefore, only when the pathogenic factor, or the evil *qi*, encounters with the body's righteous *qi* and creates a synergy [a cohesive force] therewith can the mechanism of disease starts to work. (2012, pp. 72-75; my translation)

According to the theory of TCM, the occurrence of disease results from the interplay between the righteous *qi* and evil *qi* (which include but are not limited to the *qi* of food and weather), which is full of indeterminacies and complexities. In terms of pathological interpretation, unlike what the ancient Egyptians or Greeks did to hysteria, traditional Chinese didn't put much emphasis on the anatomical structure of bodily organs; instead, they refer to a more dynamic, vibrant, and mobile way to learn the world and their own body. Disease would occur only when the movement and transformation of *qi* as a whole is incongruous and inharmonious, that is, in short, when the *qi* becomes 'abnormal'. For traditional Chinese, falling ill is nothing to be ashamed of, neither is it a sin. There is no

theoretical support for pathological stigmatization in TCM: nothing is intrinsically or permanently good or bad and everything is changing and becoming all the time.

5. Interepistemic Explorations

I'm definitely not the first person to explore the connections between Deleuzian philosophy (specifically his conceptualization of affect) and *qi* theory in early Chinese thought. Brian Schroeder, for example, in his 2022 article explores the potential relationalities between Daoist 'immortality' and Deleuzo-Guattarian 'becoming-imperceptible' starting with a very detailed tracking of etymology and theorizations of *qi* in various early Chinese classics, including the *Huangdi Neijing*. His main focus there is on Daoist sorcery, a kind of "Daoist internal alchemical ways of cultivating and harmonizing life energy" and also becoming immortal, which might sound utterly magical and even absurd to the rational mind and also might not be able to offer direct guidance for interepistemic translation studies (2022, pp. 8-9). However, I have gained inspiration from it for possible interepistemic connections between Deleuzian affect theory and *qi* theory in TCM.

5.1 An interepistemic exploration: connections between the two epistemic regimes

As we've seen, Gilles Deleuze speaks highly of Bacon's paintings, which according to him are capable of being completely present without mediation. The complete presence that Deleuze talks about is achieved by hysteria and the positivity of affect. On the other hand, Brian Schroeder argues that such presence can also be achieved by "the cultivation of *qi* flow in the torso" (2022, p. 17). As he elucidates,

There are three primary ways to energize and direct the body's energy fields. ... The third exercise (circulating or vibrating *qi*), ... focuses more on *affect*, that is, on feeling the connection between cosmic and bodily *qi* fields. This is the unification of *yinyang*. This happens when a person self-cultivates by invoking the power of *shen* [spirit or mind] in the body. When this occurs, there is also illumination or enlightenment; in other words, seeing things not only as they actually are but also as *how they can be*. ... The cultivation of *qi* enables one to be completely present in the moment, in the here and-now. (2022, pp. 17-25, emphasis in the original)

The affect that Schroeder mentions here is definitely different from Deleuzian affect; the former is more about mere human emotions or feelings. If we follow Deleuzian concepts, a reconstruction of Schroeder's statement will be: If we want to be completely present in the here and now, that is, to be fully actualized just like Bacon's hysterical figures, one way would be to feel and experience the interactions, or the connecting and exchanging, of *qi* in the body and *qi* outside in the entire cosmos; this is the way to realize the unification of *yin* and *yang* so as to experience the world and the self as a whole filled with and motivated by *qi*, or affect as forces. Ideally, this can act as an approach to surpass our biological separateness and (trans)feel the affect of other bodies in interactions with us. However, this is not just what happens on the bodily level, but also requires the participation of the mind (*shen*). This doesn't mean that there has to be logical reasoning

or thinking involved; instead, the mind participating simply means that we're aware of our own experience in this process, we perceive and sense it, and also have the autonomy to energize, channel, and (re)direct *qi* or affect in interaction. And "when this occurs", we're able to see things "not only as they actually are"—that is, affection as the state of the body—but "how they can be", which emphasizes the emergingness, evolvingness, and becomingness of affect, or *qi*.

In this way, whoever is cultivating the *qi* flow in the body becomes the hysterical figure in Bacon's painting. Their body has no clear boundaries, fixed structure, nor organisms that territorialize the organs and specify the functions thereof. In the hysterics there is only the free flowing, emerging, and transforming of *qi* and affect.

5.2 Hysterical translation studies

With the theoretical insights drawn from the reconstruction of Deleuzian affect theory and *qi* theory in TCM, it might not be hard to provide hysteria as a (mis)disease with a more post-structuralist (re)understanding that is acceptable to people from both the Eastern and (counter-hegemonic) Western epistemic regimes.

As we discussed above, there are no Platonic binary oppositions in the *qi*-based traditional Chinese thought. Therefore, what TCM is interested in is associating the rhythmic forces of nature with those of humans—arguably, positive affect for Deleuze and *zheng qi* (the righteous *qi* in the body) for the *Huangdi Neijing*—to obtain knowledge about life process, physical and mental activities, and pathological representations. Both TCM and Deleuzian affect theory pay attention to the transformativeness and dynamicities of forces, *qi* or affect. In this context, there's no way that they attribute any disease to organic lesions or disorders like what the ancient Greek did to hysteria, nor do they bother to impose stigmatizing pathologization as social construction on certain groups of people so as to demarcate them as the mad or insane.

What are the implications of hysteria in Deleuzian and TCM's terms for translation studies, then? What exactly are hysterical translation studies, as I call it, and what kinds of inspirations can it give us?

Wang Min'an argues in his 2022 monograph *Affect, Material and Contemporaneity* that:

The relationalities between British art and French philosophy are, in Walter Benjamin's terms, perhaps the relation of translation. If the body can be seen as a kind of "pure language", both French philosophy and British art ever since the 1940s or 1950s are translations (with differences) of such a pure language of the body. ... The art on the body and the philosophy on the body are mended together. ... What Deleuze does in *Francis Bacon: the Logic of Sensation* is this kind of mending work, where Bacon and Artaud translate and complement each other for a better model. (p. 90, Chinese original, translation mine)

According to Wang's reading of Deleuze, in other words, Artaud and Bacon, the two hysterics, are both intersemiotic translations of the hysterical body (without organs). And

even Deleuze himself and his school of philosophy is part of such a hysterical intersemiotic translation project. This idea is fascinating and inspiring: translation as hysteric is hysterical.

Now what I'm proposing here is to reframe this idea of translation as hysteric into 'translator as hysteric' in order to bring more flexibility to the subject. And the reason is affect, or *qi*—unlike dead texts, every one of us as a human being carries the potentialities of being hysterical in a real sense because of the existence of our body. As we've discussed in previous sections, the emergingness and transformativity of affect or *qi* makes it possible for us to break through the inter-bodily boundaries so as to explore the translationalities among different regimes and translate interepistemically. Therefore, ideally, such a translator-as-hysteric heteronym³ can act as an agency to channel the flow of such contagious affect from the source author to the target reader. But what exactly should we do to realize it?

Inspirations might be drawn from the approach used by traditional Chinese medical practitioners. In introducing the practice of diagnosis and treatment in TCM, Chen explains that:

In the diagnostic process, the TCM practitioners must actively integrate themselves into the patients' feelings to form "a unification". They adopt the four main diagnostic methods of *wang* 望 (observe), *wen* 闻 (listen and smell), *wen* 问 (ask questions), *qie* 切 (touch/take pulses) to examine the patients from different angles and layers. Although it's hard for practitioners to diagnose, for example, the changes of the shape of organs, what they can do is to make themselves the *extension of the patients*, or to unify with them by different means of perception and sensation like senses of vision, audio, and touch. In this way, they can sense the moving of *qi* in the patients' body. (2012, pp. 79-80; my translation; emphasis in original)

TCM practitioners can *co-experience* the movement and transformation of *qi* in the patient's body through sensing or feeling the outward manifestation of it, such as the patient's facial expression, body language and *mai xiang* 脉象 (image of the pulse), and thus making themselves an imagery-extension of the patient. Since, as we discussed before, *qi* (or affect) is the indeterminate forces channelled among human bodies and also between the body and the world, it makes total sense that the practitioner can, ideally, surpass the seemingly insuperable biological separateness to (trans)feel the *qi*/affect flooded in another body. In the case of translation studies, therefore, the translator-as-hysteric heteronym, or the translator-as-TCM practitioner heteronym, can act as the agency or intermediary to channel affect or *qi* and the intensities embodied in those forces through linguistic expressions that can "act immediately upon the nervous system" of the reader by, for example, awakening their "senses of vision, audio, and touch".

³ Robinson's coinage in his 2023 article "Heteronymous Narratoriality: The Translator (as Narrator) as Somebody Else", referring to other names, signifying the persona or pseudonym with idiosyncrasy of a translator before, during, and after the translating work.

In other words, in such a socio-affective ecology of audience response, there are at least two stages: 1) the translator-as-hysteric or the translator-as-TCM practitioner heteronym reads the source text as image, sound or touch objects as the audience by feeling and experiencing the *qi* or affect contained therein and 2) this hysterical heteronym channels autonomy of affect from the source text to the target reader by hysteric symptomology as avant-garde translation, specifically, for example, by jerks, stutters, or spasms as “an echo of irreducible excess” or “of gratuitous amplification” (Massumi, [2002] 2021, p. 29, quoted in Robinson, 2024, p. 25) or by prescribing herb medication or providing acupuncture therapy to (re)direct the flow of *qi* in the body of target reader. In this way, the hysterical experimental translator transforms visual or acoustic intensities into affect-becoming-(kinesthesia-)becoming-verbalization-becoming-affect-becoming-cognition and thus shatters the traditional translational organism of confined linguistic structure, semantic or pragmatic.

6. Conclusion

This might be a rather radical way of translating hysteria as a term and a social representation of certain epistemic regime. But ever since the publication of the *Diagnostic and Statistical Manual of Mental Disorders* by the American Psychiatric Association in 2013, hysteria as a clinical disease has already been wiped out in the current world. But this doesn't mean hysteria is 'dead'. What's left, instead, is the delayed and deferred traces of it dating back from the nineteenth century BCE to decades ago. Those reticulatory traces are like Deleuze's rhizomes, continuing to expand and extend from rootlessness, and radiate their own rich and ever-emerging symbolic meanings to other disciplines: translation studies, literature, cultural studies, philosophy.

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TRANSLATING WORLDS: NEGOTIATING CHRISTIAN WESTERN COSMOGRAPHY IN EARLY MODERN JESUIT MISSIONARY CONTEXTS IN JAPAN AND CHINA

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ABSTRACT: This essay focuses on documented cases of epistemic translations at the time of the encounters among Jesuit missionaries, Buddhist monks and neo-Confucian scholars in the context of early modern Catholic missions in Japan. These encounters involved intense translational activities of various kinds: linguistic (for the purpose of teaching and learning Portuguese, Japanese, Chinese and Latin), cultural (i.e. mutual learning of and adaptation to local customs and behaviors for the reception and negotiation of Christian rituals) and, epistemic: particularly of Christian cosmology, for the purpose of evangelization, and Buddhist cosmology, for the purpose of its refutation by the missionaries. We will analyse the Jesuits' epistemic translations of the Christian cosmology and cosmography and how they were challenged by equally complex and structured Buddhist and Neo-Confucian cosmologies on the part of their Japanese interlocutors.

KEYWORDS: Epistemic Translation; Early Modern Jesuit Mission in Japan; Western-Christian Cosmology; Buddhist Cosmology

1. Introduction

This essay focuses on specific cases of epistemic translation involving Jesuits, Buddhist monks and neo-Confucian scholars in the context of early modern Catholic missions in Asia. We will look at the central role occupied by the Aristotelian-Ptolemaic cosmology and cosmography in Jesuit missionary practices and how this was challenged by equally complex, structured and rigorous cosmologies on the part of their interlocutors, leading to theatrical 'cosmographic clashes' involving Jesuit missionaries, Buddhist *bonzes*, and neo-Confucian scholars. The focus will be on the strategies that both sides used to try to convince the other of the reasonableness of their point of view.

This essay therefore does not aspire to explore the theoretical dimensions of epistemic translation: instead, it focuses on documented attempts at epistemic translation between mutually heterogeneous, if not incommensurable, knowledge systems. It will provide and analyse examples of these in multilingual Catholic missionary contexts in Japan in the second half of the 16th century as an outcome of cultural interactions between Catholic missionaries and Buddhist and Confucian communities. These encounters involved intense translational activities of various kinds: linguistic (for the purpose of teaching and learning Portuguese, Japanese, Chinese and even Latin)², cultural (i.e. mutual

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¹ This essay is dedicated to the memory of Silvio Vita (1954-2023), Director and Scientific Coordinator of the Italian School of East Asian Studies (ISEAS) in Kyoto, former professor at the University of Naples 'L'Orientale', at 'Sapienza' University of Rome and most recently at Kyoto University of Foreign Studies. The research I present here has greatly benefited from Professor Vita's scientific guidance, care, subtle irony as well as critical acumen and erudition.

² Consider in this regard the trilingual, Latin-Portuguese and Romanized Japanese dictionary with about 27,000 entries, printed by the Jesuit press in Amakusa, Kyūshū: *Dictionarium Latino Lusitanicum, ac Iaponicum*, 1595. Only eight years later, when the Jesuit missionaries returned to Nagasaki after the

learning of and adaptation to local customs and behaviors for the reception and negotiation of Christian rituals)³ and, especially, epistemic (particularly of Christian cosmology, for the purpose of evangelization, and Buddhist cosmology, for the purpose of its refutation).

Much has already been written about linguistic and cultural translation mediated by the Christian mission in Japan in early modernity (e.g. Tollini, 2020; on Jesuit translations strategies *tout-court* see Bennett, 2022). Here, I will focus on epistemic translation as a possible interpretive model for deciphering the interactions between Catholic missionaries and their Buddhist and Confucian interlocutors through the lens of historically documented attempts by the Jesuits to make explicit to their Buddhist and Confucian interlocutors the complex cosmology and cosmography implicit in the Christian message.

2. Christian Dogmas and Creation *ex nihilo*

Together with the existence of the immortal soul, incarnation of Jesus Christ, history of salvation and resurrection, and belief in the final judgement, Creation *ex nihilo* and the incommensurability between the Creator and His creatures were among the dogmatic pillars of Christianity in the early modern period. Drawing on the Book of Genesis, Roman Christian scholars such as Tertullian (2nd-3rd century A.D.)⁴, Origen of Alexandria (3rd century A.D.)⁵ and Lactantius (c. 250 - c. 325 A.D.)⁶ considered Creation *ex nihilo* as a central tenet of Christianity; and from the 12th century, after the translation of the *corpus aristotelicum* from Arabic into Latin,⁷ it was incorporated into and explained through the Scholastic-Aristotelian cosmology of the homocentric spheres of the four elements, seven planets and fixed stars.

persecutions of 1596, a Japanese-Portuguese vocabulary was printed by the Jesuit press, with about 34,000 entries, the *Vocabulario Da Lingoa De Iapam, com a declaração em Portugues* (Vocabulary of the language of Japan, with the translation into Portuguese), 1603.

³ For example, Alessandro Valignano's *Advertimentos e avisos acerca dos costumes e catangues de Jappão* (Warnings about the habits and etiquette of Japan) that aimed at translating Japanese customs to Western Christian missionaries. See Valignano, 1946.

⁴ "The object of our worship is the one God, who, by the Word of his command, by the reason of his plan, and by the strength of his power, has brought forth from nothing for the glory of his majesty this whole construction of elements, bodies, and spirits; whence also the Greeks have bestowed upon the world the name Cosmos", Tertullian (Quintus Septimius Florens Tertullianus, 2nd-3rd century A.D.), *Apology* 17:1 [A.D. 197]).

⁵ "The specific points which are clearly handed down through the apostolic preaching are these: First, that there is one God who created and arranged all things and who, when nothing existed, called all things into existence," Origen of Alexandria (c. 184–c. 253), *The Fundamental Doctrines* 1: Preface:4.

⁶ "Let no one inquire of what materials God made those so great and wonderful works, for he made all things out of nothing. Without wood, a carpenter will build nothing, because the wood itself he is not able to make. Not to be able is a quality of weak humanity. But God himself makes his own material, because he is able. To be able is a quality of God, and, were he not able, neither would he be God. Man makes things out of what already exists, because he is . . . of limited and moderate power. God makes things from what does not exist, because he is strong; because of his strength, his power is immeasurable, having neither end nor limitation, like the life itself of the maker," Lactantius (Lucius Caecilius Firmianus Lactantius), *The Divine Institutions* 2:8:8, (ca. 304-310).

⁷ In particular, the *De caelo* (On the Heavens), the *Metereologica* (Meteorology) and the *Physica* (Physics).

Another important work in this context was the *Tractatus de sphaera* (On the Sphere of the World) by the Augustinian Johannes de Sacrobosco (c. 1195 – c. 1256), especially the edition curated by the Jesuit mathematician and cosmographer Christophorus Clavius (*In Sphaeram Ioannis de Sacro Bosco Commentarius*, Rome, 1570).⁸ This work was widely used for the scientific education of the Jesuits, particularly in the Roman College, and was circulated in the mission of China. Indeed, Matteo Ricci SJ quoted it, in both visual and textual forms, in the 1602 edition of his planisphere printed in Beijing (Baldini, 2013; Cattaneo, 2016b).

There is no doubt that the missionaries were more interested in the evangelization and spiritual salvation of the non-Christian communities they encountered than in their scientific acculturation. Nevertheless, due to the profound cosmological, cultural and philosophical differences that impeded the immediate, direct transmission of the Christian belief system, the epistemic translation of the Christian-Aristotelian cosmology became increasingly necessary in their interactions with the learned communities of Buddhist monks and Confucian (or neo-Confucian) scholars.

The Christian belief in God as creator *ex nihilo* of a geocentric spherical universe, from which all other dogmas and articles of faith were deduced, was in deep contrast with Buddhist and Confucian cosmological visions. As Max Moerman (2021, p. 321) explains:

According to Buddhist scripture, the entire universe is cylindrical and flat and is supported by lower strata of wind, water, and gold. The heavenly bodies revolve around the central Mount Sumeru, (*Shumisen* 須弥山) square and hourglass-shaped, which is itself surrounded by eight concentric mountain ranges, seven of gold and the eighth made of iron. Seas separate the mountain ranges and in the largest outermost sea lie four great continents: the half-moon-shaped continent of Pūrvavideha in the east, the circular continent of Godāniya in the west, the square continent Uttarakuru in the north, and the world on which we reside, the trapezoid-shaped continent of Jambudvīpa, (*Nansenbushū* 南瞻部州) in the south.

The profound differences between Buddhist and Christian cosmologies led the Jesuits to undertake a detailed critical comparison of these religious worldviews by means of textual and visual representations to attempt to transmit them through processes of epistemic translation (Cattaneo, 2021).

The composite field of Western cosmography that they translated into both written and visual form integrated elements of Christian cosmology and chronology (the Heavens and the Earth situated within the creation story, e.g. Dal Prete, 2022, pp. 1-124), Ptolemaic astronomy (the Earth placed in relation to the heavenly world of planets and stars), Aristotelian natural philosophy (the Earth placed in relation to other elements of the sublunar world, such as water, air and fire), and universal geography and chorography (the pictorial description of the world, cf. Brincken, 1968; Gautier Dalché, 1996; Cattaneo, 2016a). In the second half of the sixteenth century, at the time of the Jesuit missions in Asia, Abraham Ortelius (1527-1598) and Gerard Mercator (1512-1594) regarded

⁸ On the reception of the *De Sphaera*, see Thorndike, 1949; Grant, 2005, pp. 165-224.

cosmography as the second ranking field of knowledge, surpassed in importance only by theology: indeed, Mercator chose to become a cosmographer only because he could not afford the doctoral training required to become a theologian. His cosmographic and cartographic masterpiece, the *Atlas sive Cosmographicae meditationes de fabrica mundi et fabricati figura* (Atlas or cosmographic meditations on the creation of the world and its ‘constructed [visual] representation’) published posthumously by his son Romualdus in 1595, is revealing in this regard (Mercator, 1595). The very concept of ‘cosmographic meditations’ about the ‘created world’ unequivocally places cosmography and cartography very close to religious contemplation, and for Mercator, the world should be studied and represented precisely because it was created by God.⁹ It is therefore no surprise that his major intellectual enterprise in the last decades of his life was the publication of a synoptic edition and history of the Gospels, the *Evangelicae historiae quadripartita monas sive harmonia quatuor Evangelistarum...* (The Fourfold Gospel Harmony or Concordance of the Four Evangelists...) published at Duisburg in 1592, which focuses on and spatializes their explicit and implicit geography (Mercator, 1592).

Mercator’s intellectual trajectory, integrating theology with chronology, geography and cartography, is paramount for understanding and deciphering the “cosmographic mind” of the missionaries active in Asia. Prominent among them, in chronological order, are: Michele Ruggieri (1543-1607), who made an early attempt to draw an atlas of China based on Chinese sources (*Diccionario*, 2001, v.4., pp. 3433-3434; Lin, 2022; *Lo Sardo*, 1993); Matteo Ricci (1552-1610), who co-authored several manuscripts and printed planispheres in Chinese, including the famous *Kunyu Wanguo Quantu* 坤輿萬國全圖, *Map of the Myriad Countries of the World*, produced together with the Chinese mathematician Li Zizhao in Beijing in 1602 (*Diccionario*, 2001, v.4., pp. 3351-3353)¹⁰; Alessandro Valignano (1539-1606), ‘hidden author’ of the *Missio legatorum iaponensium ad romanam curiam* (Mission of the Japanese legates to the Roman curia), printed in Macao 1590 and largely based on a literary transposition of Abraham Ortelius’ *Theatrum orbis terrarum*, one of the first printed atlases, printed in Antwerp in 1570 (*Diccionario*, 2001, v.4., pp. 3877-3879)¹¹; Manuel Dias ‘the Younger’ (1574-1659) (*Diccionario*, 2001, v.2., pp. 1113), who, with Niccolò Longobardo (1565-1654) produced the earliest surviving terrestrial globe in 1623 in China, labelled in Chinese (*Diccionario*, 2001, v.3. pp. 2411-2412; Needham and Wang, 1959; Longobardo, 2017); and Carlo Spinola (1564-1622), astronomer and engineer at the Japan Mission from 1602 (Frison, 2009, 2018; *Diccionario*, 2001, v.4, pp. 3623-3624). These missionaries mobilized the western Christian cosmography of the geocentric universe (*mundus*) to convince their Buddhist and Confucian interlocutors of the intellectual superiority of the knowledge system connected to and conveyed by

⁹ On the concept of ‘cosmographic meditations’ see Besse *et alii*, 2008. The Latin lemma *fabrica* in Mercator’s title refers to the creation; nevertheless, it also conveys and implies a meaning of ‘creation’ as an ongoing process.

¹⁰ For the most recent re-edition of the planisphere, translated into Italian: [Ricci] Mignini, 2013.

¹¹ On Valignano’s *De missione Legatorum Iaponensium ad Romanam curiam*, see Valignano and De Sande, 2012 (English translation); Valignano and De Sande, 2016 (Italian translation).

Christianity, drawing on the Christian medieval speculative tradition of Aristotelian natural philosophy.

The synthesis of Creation theology and Aristotelian natural philosophy had been achieved in the 13th century by (above all) the Dominican Albertus Magnus (Albert the Great, c. 1200-1280), Thomas Aquinas (1225-1274) and the Franciscan Roger Bacon (1214-1294) (Grant, 2011). In the first part of the *Summa theologiae*, Thomas Aquinas distinctly defined the connections between theology, natural philosophy and cosmography:

The very order of things created by God shows the unity of the world. For this, world is called one by the unity of order, whereby some things are ordered to others. But whatever things come from God, have relation of order to each other, and to God Himself, as shown above. (Aquinas, 1920, p. I, q. 47, a. 3)¹²

In this passage, Saint Thomas debated the substantial unity of the *mundus*, that is, of the entire universe created by God, distinguishing and analysing its individual parts, in the sublunary world and in the celestial one, distinct from each other and yet linked by unbreakable bonds. It is significant that this quote was painted onto the book in the hands of Saint Thomas at the base of an enormous fresco representing the Christian Aristotelian-Ptolemaic cosmos, depicted by Piero di Puccio (active in Orvieto and Pisa in the second half of the fourteenth century) on the north wall in the monumental Cemetery of Pisa [Fig. 1].

In the context of the Catholic missions in Japan and China, where competitive interactions had developed locally with both Buddhist monks and Confucian *literati*, the Aristotelian-Ptolemaic-Christian cosmography “paved the way for the comprehension of the Creator’s significance” (Chen, 2007):

It was an embodiment of the Renaissance tradition of cartography as the graphical representation of the universe, which included the idea of understanding nature through mathematical science as well as of understanding Heaven by visualization and sensibility’. (ibid., p. 517)

The conception and theological discernment of the Christian *Deus* as Creator was grounded, therefore, on Aristotelian-Ptolemaic cosmology, and explained through the Christian natural philosophy of the spherical Heavens, made up of the seven planets, surrounded by an outer circle of the fixed stars. The sublunary world, with the four corruptible elements, placed toward the centre, provided the epistemological basis on which the missionaries could ground their disputes with the learned communities of Buddhist priests and Confucian scholars.

¹² The original quotation in Latin runs: “*Ipse ordo in rebus sic a Deo creatis existens, unitatem mundi manifestat. Mundus enim iste unus dicitur unitate ordinis, secundum quod quaedam ad alia ordinantur.*” See Aquinas, 1952, p. 334.



Figure 1. Piero di Puccio (second half of the 14th century), Theological Aristotelian cosmography of the geocentric mundus with St. Augustin and St. Thomas Aquinas. One of seven frescoes depicting the stories of the Genesis. Pisa, Monumental Cemetery, north wall, late 14th century, 715 x 810 cm (Wikipedia commons)

Hence, the presentation and explanation of the round Earth within the spherical heavens was one of the pillars of the missionaries' negotiation of the Christian message and at the centre of their critique of Confucianism, Buddhism, Daoism and Shintoism (Paramore, 2008, 2009, pp. 10-50).¹³ For Ruggieri, Ricci, Valignano, Dias, Longobardo and Spinola, none of these Eastern philosophies were able to explain the foundations and origins of the universe, and were therefore totally incapable of leading human beings to salvation. They argued, in a circular fashion, that Buddhism, Daoism and Shintoism lacked a clear understanding of the origins and shape of the universe (something made manifest mathematically by the inconsistencies of the Chinese and Japanese lunar calendar) and could therefore not have been created by God – in fact, were idolatries that had originated from the devil to confuse and divert men from salvation. Only Confucianism was

¹³ On this topic, see also Pedro Gomez, S.J., *Compendium catholicae veritatis in gratiam Iapponicorum Fratrum Societatis Iesu*; Jp. Kōgi Yōkō (講義要), c. 1590, whose three parts include the *De Sphaera*, *De Anima* and a Christian doctrine, in Latin. The three parts were translated into Japanese by the Spanish Jesuit Pedro Morejon. The *Compendium* was 'the most extensive Jesuit text in Japanese we have extant, [...] seemingly the basis for theological education in the Japanese Jesuit colleges', cf. Paramore, 2009, p. 23. Modern edition: Gomez, 1997-1999. Specifically on Gomez's *De Sphaera*, based on the *Compendium philosophiae naturalis*, by the Franciscan Franciscus Titelmans (1502-1537), see Hiraoka and Watanabe, 2015.

acknowledged (by Matteo Ricci) as a form of natural religion, which, though incomplete and distorted, could provide a foundation for a new Christianity in China, in much the same way as Stoicism had done with respect to early Christianity.¹⁴

3. Epistemic Translations: the Jesuit viewpoint

These assumptions, and the political-religious epistemology underpinning them, spread and became a literary trope in Jesuit letters and reports. For example, the eloquent *Annual letter from Japan* of 1605 reports a theatrical dispute that took place between the Jesuits (in particular, Carlo Spinola) and some *bonzes* [Buddhist monks] in the presence of the shōgun Tokugawa Hidetada. Here are a few passages that I translated into English from the original source in Portuguese:

With the arrival at Miaco [Kyoto] of the son of the Kubō [Tokugawa Hidetada, son of the Kubō 公方 Ieyasu] from Quantó [Kantō 關東] to take the rank of shōgun [...] there were numerous visits to our homes [the missions], in particular to the mission of Miaco [Kyoto], as they [the Japanese] were moved out of curiosity [...] to see new things and some instruments we have in the house that show the movements of the planets and other European instruments never seen in Japan; and with this occasion, many of them listened to us and were baptized. [...] The Japanese listened to us with great interest and curiosity about astrology [astronomy] and mathematics and showed us great consideration; and this caused great discredit [...] to their *bonzes* [Buddhist monks], because the things that we teach about the movement of the Sun, Moon and planets, the representation of the elements, and other teachings dealing with meteorology, thus being in complete accord with reason and experience, just makes them fall into the truth of these and makes them realize how absurd are the opinions and stories of their *bonzes*.¹⁵

The reference to Tokugawa Hidetada (1579-1632), the second *shōgun* of the Tokugawa Shogunate, suggests that the episode has probably been exaggerated, presumably to impress their Jesuit *confrères* in Macao, Goa and Europe. But whether or not the passage is an accurate record of what actually happened, it is nevertheless possible to detect the same circular argument linking Buddhist inconsistencies in cosmology and astronomy with eschatological and moral falsehood, a trope also developed by Ricci to challenge and dispute with his Chinese (Buddhist and Confucian) interlocutors.

¹⁴ See Ricci's *Dell'amicizia* (On friendship), composed by Ricci in Nanchang, in November 1595, originally authored in Italian and later translated and printed in Chinese. Modern edition (Chinese and Italian): Ricci, 2005. This work aims at showing the moral compatibility and similarity between Greco-Roman and Christian Humanism with the Confucianism. At this regard, it's worth recalling Ricci's definition of Confucius as "another Seneca". *Dell'amicizia* (On friendship) was written in the very moment in which Ricci decided to assume the posture, habits and status of a Confucian *literatus*, literally taking off the clothes and abandoning forever the posture of Buddhist bonze that for almost fifteen years, with his *confrère* Michele Ruggieri had kept, since their entrance in China in 1579 and 1582, respectively.

¹⁵ *Annua de lapam do anno de 1605*, Rome, ARSI, Jap. Sin. 55, ff. 274v-275v. See Frison, 2009, pp. 15-16, and note 73 for the transcription.

An early seventeenth-century *nanban* folding screen (*byōbu*)¹⁶, currently held in the Nanban Bunkakan Museum in Osaka, provides a visual representation of the “new things and some instruments [...] that show the movements of the planets” that the Jesuits had in their residences. In the upper left-hand corner, the screen displays a Jesuit residence on the outskirts of an unidentified, imaginary Japanese port city, inhabited by Portuguese and Japanese merchants and their multi-ethnic crews and slaves, Japanese women, Jesuit missionaries and novices, and also (on the right-hand side) a Franciscan friar, interacting with a Japanese man [Fig. 2]. The Jesuit residence comprises a *nanban-ji* (a wooden Christian church, built in the architectural style of a Buddhist temple, with a cross on the top of the *kawara* 瓦 roof) and another building whose entrance is protected by a gate. To the left of it, facing the street outside, is a huge image hanging or depicted on a wooden panel. At the top of this, with three indigo lotus flowers, is a huge geometric representation consisting of eight concentric circles that fully occupy the left wall. By keeping to the proportion of the objects represented in the folding screen, the size of the circles would indicate a huge, nearly square depiction, at least about one and a half meters in size. The drawing with the eight concentric circles, traced with the compass, could represent an astronomical diagram of the Aristotelian-Ptolemaic cosmos. The representation could be an enlargement of the astronomical diagrams printed for example in the comments to *De Sphaera*. Hanging at the entrance to the mission, facing the street, it would have been visible to all that approached or simply walked along the adjacent street. If this interpretation is correct, then the Aristotelian-Ptolemaic cosmology of the elementary and celestial concentric spheres, generated by the creative will of God, was one of the emblems of the Christian mission, together with the cross, visible on the top of the roof of the *nanban-ji*. The representation of the cosmological diagram could potentially also function as a metonym for the entire western planisphere, like the astronomical diagrams generally placed in the corners of Matteo Ricci's planispheres in Chinese.

¹⁶ *Nanban* folding screens, also known as *nanban byōbu*, are a Japanese pictorial genre that emerged at the beginning of the 17th century. On large, paired screens, they depicted Western ships arriving from imaginary port cities in India, and the disembarkation of Portuguese merchants, their crews (including slaves) and Catholic missionaries, particularly Jesuits. The highly detailed and colorful pictorial representations also show the many European, Persian, Indian and Chinese goods transported by the Portuguese to Japan, including textiles (silk in particular), and exotic animals. See Sakamoto, 2008; Curvelo, 2015, Fujikawa, 2016.



Figure 2. Image with eight concentric circles, possibly a representation of the Christian Aristotelian cosmos, depicted on the outer wall of an early 17th-century Jesuit residence in Japan. Detail from one of a pair of nanban folding screens, ink colours and gold on Japanese paper. Ōsaka, Nanban Bunkakan, early 17th century (Angelo Cattaneo)

4. Epistemic Translations: the Neo-Confucian viewpoint

Interestingly, there also exists a brief dialogue, *Hai-Yaso* (The Anti-Jesuit) 俳耶蘇, about cosmological and cosmographical topics attributed to the renowned neo-Confucian master and academician Hayashi Dōshun (林羅山, 1583-1657, also known as Hayashi Razan) in which he engages with Fukan Habian (不干齋, Fukansai, c. 1565–1621), a Buddhist writer who in 1583 converted to Christianity, becoming a ‘brother’ (irmão) of the Society of Jesus in 1588.¹⁷ The short dialogue, written from the point of view of neo-Confucianism, was clearly attempting to demonstrate the inconsistency of the Christian cosmology of the spherical world, as exemplified by the globes and armillary spheres brought to Japan by the Jesuit fathers and displayed to the Japanese political and military authorities to impress, challenge or ridicule local Buddhist or Neo-Confucian scholars and religious authorities (Moerman, 2021, pp. 319-323).

The dialogue was originally dated 22 July 1606 but has recently been postdated to around 1640 and declared apocryphal by Paramore (2008). In 1606, Hayashi Dōshun would

¹⁷ After 1608, Fukan Habian renounced Christianity and in 1620 published an anti-Christian essay, *Ha Daiusu* (Against *Deus* – the Christian God – or *Deus* destroyed). See Elison, 1988; Paramore, 2008, 2009, pp.10-50.

have been only 23 years old, and it is very unlikely that he would already have been recognized as the great Confucian master that he appears in the dialogue. However, the date of 1606 is significant, as it coincides with the episode of the cosmographic dispute between the *bonzes* and the Jesuit fathers in the presence of Tokugawa Hidetada, described above. The dialogue attributed to, or just featuring Hayashi, fits into the same conceptual paradigm, developed by the Jesuits, of the recourse to the (presumed) scientific inconsistency of one's interlocutors, to show their moral and gnoseological unreliability.¹⁸

The dialogue proceeds as follows. On July 22nd 1606, Hayashi Dōshun is invited to enter a Jesuit residence, where he meets Fukan Habian and his Jesuit *confrères*. Having received a warm welcome, they sit down, and Hayashi notices a globe on display in the room. Provocatively, he asks Fukan Habian to explain the device to him. In response, the Japanese Jesuit shows him how, with a spherical earth, east and west are relative concepts rather than physical realities (unlike north and south), as evidenced by the navigations that brought the the Europeans (*nanban-jin*) to Japan. However, Dōshun flatly rejects this statement and the cosmology underlying the spherical world. To ridicule Fukan Fabian, he contrasts it with the neo-Confucian cosmology of Zhu Xi (朱熹 1130-1200), in which a flat non-spherical earth is encapsulated into a celestial hemispherical heaven. In Confucian cosmology, he argues, all cardinal points are connected to spatial and physical realities that are stable and well defined, and this quality makes Confucianism more reliable and rational than Christianity.

Hayashi Dōshun goes on to address the heart of the question underlying the cosmographic dispute: the belief that the world was created by God, creator of all things, visible and invisible. He does so, by referring explicitly to Matteo Ricci, in a quote translated by George Elison that is worth transcribing, with minor stylistic variations:

Dōshun says. The Jesuit Matteo Ricci argues, Heaven, earth, spirits and gods and the human soul would have a beginning but not an end. I don't believe this. If there is a beginning, there is also an end. It is believed that both beginning and end are missing. But it is not correct that there is a beginning, but no end. Confirmation is therefore necessary.

Fukan could not answer.

Dōshun: God created the universe etc etc, but who created God?

Fukan: "God has no beginning and no end and the earth is created. Instead, on the contrary, that God is without beginning and end cannot be ignored. This is very clear. (Hayashi, 1988, p. 151)

Then, the discussion moves onto the fundamental cosmological principles of neo-Confucianism, the *ri* ('principle' or 'pattern') and *qi* ('generative energy'), as the primordial forces driving the world. By expanding on Zhu Xi's neo-Confucian philosophy, according to Dōshun, these forces precede and generate God too (Tucker, 2018). Two conclusions are

¹⁸ Japanese edition: Hayashi, 1970; German translation: Müller, 1939; English translation and commentary: Hayashi, 1988, pp. 149-153.

attributed to Hayashi (Hayashi, 1988, p. 153), which we transcribe from Elison's translation, with minor stylistic variations:

Conclusion. The Jesuits argue that even under the earth there is heaven. If you dug through the earth and reached the bottom, you would surely see the sky, as if you were looking out of a well. For this reason, the falling stone stops in the centre of the earth and there is no top and bottom. This would be a confirmation [for the Jesuits] that the earth would be the centre of the heaven. However, I believe that all things between heaven and earth that I see have an above and a below. [...]

Conclusion. The Jesuits argue: the sky is round, and the earth is also round. I believe that everything is movement, everything is calm, everything is angled, and everything is round, especially the universe. And the reason is as above. If things were as according to their words, there would be neither angled nor round, neither movement nor calm. (Hayashi, 1988, p. 153)

For historians of culture and science, it is undoubtedly fascinating to imagine Hayashi Dōshun, the future tutor and an advisor to the first four *shōguns* of the Tokugawa *bakufu*, engaged in a debate with Fukan Fabian in a Jesuit residence. But even if the dialogue were no more than a literary fabrication, authored much later than the alleged date of 1606, the dialogue does not lose its cultural relevance. Based on the founding principles of neo-Confucian philosophy, it offers a radical critique of Christian cosmology, starting from an ironic reading of the cosmology and cosmography translated by the Jesuits and using their own rhetorical trope of 'scientific inconsistency' against them.

If Paramore's hypothesis is correct, it is very interesting to observe how even in 1640, almost thirty years after the expulsion of the Jesuits, Christian cosmology was still the object of critical reflection, at least in neo-Confucian learned communities. In the immediate aftermath of the Shimabara rebellion,¹⁹ the epistemic translation of the Christian cosmos, its spherical shape and geometry, continued to interpellate Buddhist and Confucian cosmologies even decades after the abrupt expulsion of the missionaries from Japan in 1614.

5. Conclusion

The events and documents that we have considered here are concrete examples of attempts at epistemic translation between mutually incommensurable belief systems at the interface of cultures in the Early Modern period. The mutual incompatibility of the Christian-Aristotelian and Buddhist-Confucian worldviews produced the complex attempts

¹⁹ The Shimabara Rebellion broke out in the autumn of 1637, near Shimabara in southern Japan, when peasant communities rebelled against excessive taxation and abuse by governors, as well against violent repression of Japanese communities who had converted to Christianity. The revolt was put down in blood, by shogunate troops sent from Nagasaki and ended with the beheading of more than 35,000 people, including women and children, in addition to the rioters. Suspecting that Christian Portuguese merchants had surreptitiously fostered the uprising, some 25 years after the expulsion of Catholic missionaries (1614), the shogunate decided in 1639 to also sever trade relations with the Portuguese, expelling all Portuguese and preventing their ships from docking (See Ramos, 2021).

at epistemic translation that was at the heart of the project of Christian conversion of Japan carried out by the Jesuits from the mid-sixteenth century onward. Although the Catholic religious orders were expelled from Japan in 1614, and Christianity eradicated, the Aristotelian-Ptolemaic concepts of the spherical earth and spherical universe, which the Jesuit missionaries had discussed with and taught to their Japanese interlocutors, gradually took root in Japan in a ‘purified’ form, detached from their Christian epistemological matrix (Cattaneo, 2021; Moerman, 2021).

In the light of the documentation we have considered, epistemic translation was an essential tool for addressing the complex histories of cultural interactions in the early modern age, at the time of the first contacts between major urban civilizations on a global scale.

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TRANSLATING EXPERIENCE, EXPERIENCING TRANSLATIONALITY

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ABSTRACT: Starting from reflections on information as knowledge involving the formation of ideas and minds, this article invokes Tim Ingold's concept of *wayfaring* that highlights the processual, emergent, and social aspects of becoming knowledgeable. 'How do we know?' is posed as a fundamental epistemological question focusing both on the sources of knowledge (investigation, study, and instruction) and the complex processes of knowledge formation and transfer. Given that the epistemic processes of making sense and assessing evidence rely on experience, the latter element is analysed in detail as an English-language concept, including its history, development, and current status, leading to the notion of experiential knowledge. The final part of the article, by drawing on translation as corporeal movement, suggests translationality as an epistemology experientially grounded in material translation. The experience of translationality is subsequently related to music and musical instruments. The article closes with a call to explore other forms of translationality.

KEYWORDS: Information; Knowledge; Experience; Translationality

1. Knowledge and information

In her article setting the stage for the EPISTRAN project, Karen Bennett repeatedly writes about knowledge translation in terms of "information transfer" or "information transit" (2024). The 'transfer/transit' parts of these phrases – and their nominal derivatives *translation* and *translationality* – have received a lot of attention in recent years (Robinson, 2017; Marais, 2019; Blumczynski, 2023; Vidal Claramonte, 2022, 2023, 2024) and will be further explored later in this article, but the *information* part often appears to be glossed over or taken for granted. Yet this is precisely where I think we should start. What is information? The *Merriam-Webster Dictionary* defines the noun *information* as "knowledge obtained from investigation, study or instruction"¹ and the (intransitive) verb *to inform* as "to impart information or knowledge"². Before we examine these definitions at some depth, it is important to note that they do not equate information with knowledge in a bi-directional relationship. In other words, we can accept the proposition that 'information is knowledge' (derived from various sources) without conceding that the reverse is also true. Asserting that 'knowledge is information' might provoke objections: surely knowledge is *not only* about obtaining or possessing information, *but also* – if not *mostly* – about the ability to process it, evaluate it, apply it, and so on. A database contains lots of information but no knowledge; information needs to be translated into knowledge. That is why knowledge is always constructed and situated contextually, linguistically,

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¹ Available at: <https://www.merriam-webster.com/dictionary/information> (Accessed: 18 June 2024)

² Available at: <https://www.merriam-webster.com/dictionary/inform> (Accessed: 18 June 2024)

culturally, ideologically, and so on (which may imply that information is not – a false dichotomy, as I will argue below).

1.1. Drawing lines, forming ideas and minds

Reasonable and valid as these objections appear, they also demonstrate a superficial grasp of what information is, what it does, and how it works. Where did we get the idea that information is decontextualized bits of data that only become meaningful in context? Not from the word itself, for sure. Its sense could not have been plainer: information is about *in-formation*, about stuff that is contingent, emergent, and continuously taking shape. The Latin verb *īnfōrmō* may carry a familiar pedagogical sense “to inform, instruct, educate”³ – but the underlying conceptualization draws on experience that is as profoundly manual as it is mental: “to delineate, sketch, form an idea”⁴. What we have here is an image of drawing lines and outlines: boundaries as well as pathways. This connection between lines, information, and knowledge has been drawn compellingly throughout Tim Ingold’s work (1993, 2007, 2010, 2011, 2015), recently applied to translation studies by Sue-Ann Harding (2021). For Ingold, epistemological systems are too often “parcelled up into discrete cultures” (1993, p. 229); indeed, the very concept of culture “fragments the experiential continuity of being-in-the-world, isolating people both from the non-human environment (now conceived as ‘nature’) and from one another” (p. 230). Translation is usually presented as a remedy for this fragmentation and isolation (its ability to make connections, build bridges, and so on, is often highlighted) – but the real problem is the underlying conceptualization and its “alienating discourse”. Yet, as Ingold argues, lives are lived – and, we could add, knowledges emerge – “not inside places ... but through, around, to and from them, from and to places elsewhere” (2011, p. 148), along pathways and among wanderings. Invoking well-known tropes, we could say that “the journey is the destination” and “the medium is the message” (McLuhan, 1964) – a move that points us away from a substance-based ontology (knowledge as discrete units of stable information; information as bits of data; data as something objectively “given” [to draw on an etymological argument once more]) towards a more processual conception in which knowledge, information, and being itself are fluid and emergent. For Ingold, “our most fundamental mode of being in the world” (2011, p. 152) is through *wayfaring* – his term to describe “the embodied experience of this perambulatory movement” (p. 148). Therefore, “learning is processual, and rather than knowledge being transmitted from one blob (teacher) to another (learner), we *become knowledgeable*” (Harding, 2021, p. 355). What is worth highlighting here is the essential role of experience: wayfaring is not simply a metaphor to describe changes to a mental state (a common misconception of knowledge). Instead, “knowledge is grown along the myriad paths we take as we make our ways through the world in the course of everyday activities, rather than assembled from information obtained from numerous fixed locations” (Ingold, 2010, p. 121) – in a word, it is rhizomatic. We will soon consider how

³ Available at: <https://en.wiktionary.org/wiki/informo> (Accessed: 18 June 2024)

⁴ Available at: <https://en.wiktionary.org/wiki/informo> (Accessed: 18 June 2024)

exactly information is obtained from various sources, but it should be stressed that “we do none of this alone ... Becoming knowledgeable is social” (Harding, 2021, p. 356).

I find it fascinating that much of this rich, inspiring theorization may also be advanced through semiotic reasoning based on etymological data: as we said, *īnfōrmō* is to “delineate, sketch, form an idea”. Delineating is drawing and tracing lines; sketching is producing an approximate and prototypically visual representation: an impression, an image, a model, a scheme. This signals its semiotic – or, to be more precise, iconic – nature: a sketch, image or model is not only itself but functions as a sign of something else it resembles. A map is not the territory, a photograph is not the object depicted by it, a bust is not the person it commemorates – but they all represent other entities through similarity or imitation (which is what iconic signification consists of). This similarity, again, is not objectively “given” but must be recognized: an idea must be *formed*.

It is here, closest to the etymological core of *īnfōrmō*, that we find the sense “to form, mould, fashion”.⁵ To inform is thus to give form or shape to something – but also “to form the mind of, teach”. This is a crucial point, and one worth restating. **The concept of information presupposes formation – not just of observations, ideas, judgements, and conclusions, but also of minds.** Minds are not only the sites of formation but also its objects. This etymology points us towards “embedded, embodied and subjective forms of knowledge”⁶ – another key part of the EPISTRAN motto on which I will reflect later on.

1.2. How do we know?

Meanwhile, let us return to the simple definition quoted earlier and focus on the image of information as “knowledge obtained from investigation, study or instruction”.⁷ One of the greatest, all-encompassing epistemological questions is of course ‘How do we know?’ In this preliminary conceptual interrogation, it is worth focusing first on the interrogative (pronouns in particular). To be sure, the question ‘*what* do we know?’ is almost nearly as important; and ‘*who* do we know?’ may indeed be vital in some critical situations (other contextual questions about *where* and *when* are important in situating our knowledge in geographical and temporal terms, and their various complex entanglements: geopolitical, historical, economic, etc.).⁸ But the adverbial *how* in ‘How do we know?’ at least to my ear, stretches farther than the other interrogative pronouns. As I argued elsewhere, *HOW* ... not only overlaps with all the other contextual elements but is presupposed by them, especially by the *WHAT*. If we have something to say, we have to say it somehow. The manner – the *HOW* – [often] overrides the matter. The approach can dictate the findings,

⁵ Available at: <https://en.wiktionary.org/wiki/informo> (Accessed: 18 June 2024).

⁶ Available at: <https://www.epistran.org/> (Accessed: 18 June 2024).

⁷ Available at: <https://www.merriam-webster.com/dictionary/information> (Accessed: 18 June 2024).

⁸ It is worth stressing that even in what we consider as perception of information, “[t]he constructed nature of images forces the viewer to reflect on the diversity and inequality of those who are looked at. In this venue, John Berger (1972) asked many years ago if the way in which we look affects what we know. And Roland Barthes emphasized that every image, like words, brings with it that secondary level of meaning, which is really what must be translated” (Vidal Claramonte, 2022, p. 31). See also Mirzoeff, 2015.

and this is where our hermeneutic, epistemological and phenomenological assumptions come to the fore. Eventually, what we conclude about a given phenomenon is largely dictated by how we approach it (Blumczynski, 2016).

‘How do we know?’ is thus a fundamental epistemological question that cuts to the core of epistemic translation, too. The connection with the epistemic is clear; but how exactly does it relate to translation? To start with, the question itself cannot be separated from the language in which it is asked – therefore, there is enormous value in rephrasing “the same” question in different languages and otherwise inflecting it. If I were to consider it in my first language, Polish, this question would usually be phrased as ‘*Skąd [to] wiesz*’ [where do you know it from]? The German phrasing is very similar: ‘*Woher weißt du das?*’ Again, let us focus on the interrogative pronouns. *Skąd* and *woher* ask about sources. Where are you drawing your knowledge from? Who told you this? This is a very specific emphasis, highlighting the origin of knowledge, rather than the process of its formation. It brings to mind the meaning of information as “knowledge obtained from investigation, study or instruction”.⁹ Formulating this profound epistemological question in Polish or German, we reflect on issues of reliability, credibility, and perhaps also authority. In particular, *instruction* as a source of knowledge invokes a formal and often hierarchical structure (reverberating in the word *in-struct*) wherein knowledge flows mostly in one direction. Someone tells me how things are, or how to do (or not to do) things. Instruction finds its most extreme form in religious contexts which are often strongly hierarchical and employ revelation: the kind of knowledge to be accepted and followed but usually not open to questioning or verification. África Vidal Claramonte (2022, p. 30) reminds us “how institutions, who cling to certain ways of seeing and ordering the world, cause them to prevail so that other views do not seem to be possible”.

Knowledge obtained in a course of study is a little different. It is not *revealed* but rather *discovered* or even *created* in a process of searching, and re-searching, analyzing, and reflecting. Studying places the onus on the student, the knowledge seeker: there is intention, effort, focus, purpose, direction, selection, and so on. Studying is making sense.

Knowledge obtained through investigation is different still. It is not confined to searching for something and finding things out but also consists of putting whatever has been found to a test. Investigation involves speculating, hypothesizing, verifying, validating or disproving; it works with questions of probability, explanatory power, and strength or weight of evidence. This kind of knowledge is most prominently *constructed*, built out of various pieces that are carefully examined and fitted together into something that makes sense.

Summing up, our key epistemological question phrased in English, ‘How do you know?’ invites us to reflect not just on the sources of knowledge but also on the complex process of *in-formation* and its *transfer*: giving form and shape to something, while also recognizing that it forms, moulds, and shapes our minds. Contrary to a mechanistic, simplistic, strawman conceptions attributed to *information transfer* (think of the often ridiculed conduit model, and the staple arguments against invariance; cf. Blumczynski, 2023, pp. 2, 24), this phrase may be also wonderfully insightful, complex and emergent,

⁹ Available at: <https://www.merriam-webster.com/dictionary/information> (Accessed: 18 June 2024).

when you think of *in-forma-tion* along the lines I sketched above, while also bearing in mind that *transfere* and *translatum* are merely two grammatical inflections of a single lexeme in Latin. Information transfer, epistemic translation, and ecology of knowledges are all parts of an extended ‘meshwork’ – another favourite term in Ingold’s vocabulary (set against Bruno Latour’s [1987; 2007] ‘network’). However, the epistemic processes of making sense and assessing evidence are not complete without the third element that they both presuppose: experience.

2. Translating experience

Working our way back, then: experience, evidence, and sense. A conceptual triad that also happens to be a title of an intriguing book by the Polish-Australian ethnolinguist Anna Wierzbicka (2010) that will guide a large part of the subsequent discussion. It is here that I am coming to the first part of my title: translating experience. How can we translate experience? Why should we? Once again, insights from interlingual translation are pertinent. In Polish, there is not one but at least three words referring to this concept (often used in the plural). *Doznania* comes from *znać*, to know, to be familiar with someone or something. *Doświadczenia* has an element of *świadczanie* (testimony, provision) but can also mean scientific experiments. *Przeżycia* literally means ‘something [one has] lived through’ (similar to the German *Erlebnis*).

This is a very rich, varied, and complex picture of ‘what experience is in Polish’. It is also a very Anglocentric way to put it, of course. A Polish-language knowledge seeker would not try to subsume these three (and possibly other) concepts under a single, all-encompassing one. To live through something, to experiment, to testify, to provide, and to know are of course loosely related to each other, but they are not subcategories of some super-ordinate concept that Polish happens to have no single word for. This is another crucial point. Polish – or any other language – is not anomalous by separating these various ways of knowing, or acquiring knowledge, any more than the epistemic system of English is anomalous by compressing them into one. In other words, there is no need to assume that there exists some meta-lingual, pan-lingual, universal concept of EXPERIENCE that is lexicalized (or not) differently in various languages. Rather, we need to listen to these languages respectfully and learn from them as we construct our translational epistemology, not shoehorn their epistemic perspectives into that of English, or some other master language. So let us be wary of an epistemic leap of faith that has become all too common. *Experience* is an English word and concept, not something shared between all humans. Before we ask how we can, might or should translate experience (and, therefore, knowledge[s]), we need to admit that experience needs translation.

2.1. EXPERIENCE as an English-language concept: its history, development, and current status

This is, roughly speaking, a starting point for Wierzbicka (2010) who in her book *Experience, Evidence, & Sense* makes a claim that all three titular keywords denote uniquely English

cultural themes. Wierzbicka takes a strongly relativist perspective and argues that there exist certain “verbal cues” and especially certain keywords, that “define the conceptual world inhabited by speakers of particular languages. She goes all the way back to Wilhelm von Humboldt (1988, p. 60) and his words from over two centuries ago that “there resides in every language a characteristic world-view” (Wierzbicka, 2010, p. 4). She posits that even though there are many ‘Englishes’ around the world, there is also an Anglo English, neither homogenous or unchanging, and yet separable as a useful abstraction founded on a shared verbal and conceptual history. In her earlier book *English: Meaning and Culture* (2006), she demonstrated that everyday English words, such as ‘right’, ‘wrong’, ‘reasonable’, and ‘fair’ “contain a wealth of history and pass on a great deal of cultural heritage” (2010, p. 5). Words of this kind – she argues – “may be ‘invisible’ to native speakers, who simply take them for granted and assume that their equivalents exist in other languages” (p. 5). In *Experience, Evidence, & Sense*, Wierzbicka “extends the exploration of the hidden cultural legacy of English and focuses in particular on some of the most basic ‘Anglo’ assumptions about ways of knowing – assumptions that English carries with it, imperceptibly, in its spectacular expansion in the modern world” (p. 6). Her chapter devoted to experience spans nearly seventy pages, so I can only offer a synopsis of but one strand of her argument.

Drawing on a wealth of examples from literature, lexicography, philosophy, religion, art and history, Wierzbicka reconstructs the semantic history of the word *experience* in English, which includes “past experience, accumulated knowledge” and “current experience, sensory, or sensory-like” (2010, p. 31), to demonstrate how *experience* casts its long shadow over English-language knowledges, both popular and specialist. Against detailed comparisons with lexical counterparts in French, German, and Russian, she concludes that “the word *experience* is often untranslatable (without distortion) into other languages, even European languages” (p. 31). This is a strong claim, with potentially serious repercussions for the discussions of ecology of knowledges. It compels us to examine not only how knowledges are (or might be) translated but also to what extent our epistemic foundations may be inflected by semiotic, linguistic, and cultural patterns of which we are only vaguely aware. So, let us be epistemically cautious when talking about experience as a basis, foundation, or catalyst of our knowledges – and let us not forget that by switching to a different language, we are also inevitably shifting our focus, or emphasis, or some other important aspect.

For example, Wierzbicka points out that *experience* is a word frequently used in advertising: people are urged to visit this or that place to have a “unique experience” in zoos, aquariums, museums, national parks, and so on. Enjoyable experience, thrilling experience, exciting experience. In academia, we are pushed to enhance ‘student experience’ – a concept that includes some residue of study and learning but highlights the contextual elements around it: the quality of facilities, range of attractions, level of engagement; in short – if you excuse this trivialisation – how much fun you are having as a student as you participate in various aspects of the so-called ‘student life’. Experience becomes reified here: it is something measurable by surveys, something that may have a

direct influence on universities' league tables, and therefore funding levels, international recruitment, and so on. Universities, possibly more than ever before, stand or fall in direct relationship to the levels of 'student experience'. This expression is rather difficult to translate into other languages, and I often see it used untranslated, as a borrowing, invoking the images of campus life typical of universities in the English-speaking world. I mentioned trivialization; indeed, it seems very easy to reduce this rich concept of experience to figures and commodify it. This is why I often find myself resisting this emphasis, feeling that it inflates certain elements of the context of study while diminishing others. Who is teaching you, and how, is probably a bit more important than how the distance to the nearest disco, or how much beer twenty quid will buy you. So, let's be careful about what we call experience. In particular, let's not buy too quickly or uncritically into the readily measurable, commodified, commercialised, monetised experience, and its questionable foundations.

Against this reductionist view, Wierzbicka (2010) demonstrates the complexity of the polysemous word *experience* by offering detailed semantic analyses of its various strands as they developed over the centuries. For example, in Shakespeare's sapiential perspective, it is the mother of wisdom: "Experience is by industry achieved / And perfected by the swift course of time" (*The Two Gentlemen of Verona*, act 1, scene 3; cf. Wierzbicka, 2010, p. 34). In this case, *experience* is something accumulated over time by doing things and presumably by reflecting on them: knowledge is seen as a gain, and is associated with advanced age – in short, it is "a doer's accumulated knowledge" (Wierzbicka, 2010, p. 35). There is an element of sustained exposure, overriding ad hoc impressions. Think of John Donne's *Songs is Innocence and Experience*, and John Milton's ideas of consciousness typical of Paradise and Fall, on which Donne draws.

With time, a more recent meaning has emerged, most visible in the adjective *experienced*: an experienced teacher, or an experienced driver, capturing "a doer's specialized skill" (Wierzbicka, 2010, pp. 36–37). This is close to the concept of procedural knowledge: how-knowledge, or indeed the KNOW-HOW. This kind of knowledge is often highly transferrable: that is why a successful CEO of a pharmaceutical company may be headhunted to take a similar role in IT industry. While KNOW-WHAT or KNOW-THAT are usually industry-specific and must be acquired anew, we can bring our know KNOW-HOW with us, quite literally *translating* it to a new context.

There is also another nuance to experience, captured in the phrase "it was a/an [adjective] experience" (as a count noun). Wierzbicka (2010, pp. 39–40) reports no such occurrences before 1850, but notes that numerous examples appear in the second half of the 19th century), often with the adjective *new*: "it was a new and pleasant experience"; "it was a new and amazing experience", "a new and disagreeable experience" (p. 40) This is a very common usage these days, as in "We had a water birth ... It was a great experience and no problem" or "Domestic/food prep in a five-star hotel ... It was a fantastic experience. (Wierzbicka, 2010, p. 40), All these examples highlight something unusual happening, affecting how the experiencer is feeling. The event linked with the feeling is arresting; it is

a subjective, contemporaneous perspective and “awareness that gives the undergoer a special, subjective knowledge of a particular event that is not accessible to other people” (p. 42). Based on a large corpus of data, Wierzbicka concludes that “in the semantic history of *experience*, there occurred (between the sixteenth and nineteenth century) an important shift from a long-term and retrospective view, which was also objective, external one, to one that was subjective and internal, as well as short term and introspective” (2010, p. 43).

2.2. Experiential knowledge

This is precisely the angle taken in a recent Forum published in the journal *Translation Studies*, whose contributors explore some of the epistemic, ethical, political, and linguistic considerations in representing experiential knowledge (Susam-Saraeva, 2021, and subsequent responses). I cannot reflect on this more fully here, but recommend this Forum as pursuing some threads that are highly relevant to the aims of the EPISTRAN project. Translating experiential knowledge is entangled with burning questions of ethics, politics, entitlement, enforcement, and a myriad of other highly complex and sensitive perspectives. This kind of translation proceeds “not through the intellect, but through the emotions”; it is “an experiential category, whose core is a sensory experience” (Vidal Claramonte, 2024, p. 94).

At the same time, it is noteworthy how often and how strongly philosophical prose in English depends on the various inflections of the word *experience*. Here is John Searle, as one example, critiquing Hume: “When I turn my attention inward, he [Hume] tells us, what I find are specific experiences. I find this or that desire for a drink of water, or a slight headache, or feeling of pressure of the shoes against my feet, but there is no experience of the self in addition to these particular experiences” (Searle, 2004, p. 278, quoted in Wierzbicka, 2010, p. 60). As Wierzbicka (2010, p. 61) points out, “the idea of deliberately ‘turning my attention inward’ to observe what is currently happening to me (in me) became lexicalised in English in the course of the seventeenth and eighteenth centuries (as a new meaning of the word *experience*).

So, [w]hen Searle speaks of “experiences”, he appears to take such acts of self-observation for granted, but in fact, thinking in those terms is a modern Anglo habit of the mind that derives from the empirical tradition and its reflection in the English language. For example, when I as a native speaker of Polish, turn my attention inward, I do not find any “specific experiences”. I do find certain feelings – for example, a headache, or a feeling of pressure of the armchair against my body. I also catch myself having (or having just had) certain thoughts. But I do not think of any of these in terms of “experiences”. I can talk about such exercises in introspection in both Polish and English in terms of “feelings”, “thoughts” and “what is happening to me”, because both Polish and English have lexicalised the universal semantic primes FEEL, THINK, HAPPEN and ME (I). However, I could not talk about them in Polish in terms of “experiences” because there is no such word in Polish and no such habitual interpretive scheme (Wierzbicka, 2010, p. 61).

Experiencing something may often be used to complement or counter mental, theoretical, more 'objective' perspectives and positions. The shift in the sense of experience identified by Wierzbicka seems to correspond to the tension between technical 'scientific' knowledge (i.e. the kind of knowledge which purports to be objective, rational and universal) and "the various embedded, embodied and subjective forms of knowledge that have served as its Others in different times and places".¹⁰ This tension holds across time, but also within and between languages. Perhaps experience is something that integrates thinking with feeling? What seems undeniable is that, from a diachronic perspective, experience and experiencing in English have undergone significant intralingual translation over several centuries. From a synchronic perspective, experience and experiencing, when discussed interlingually, need careful, epistemically nuanced, multi-dimensional translation, often into more specific concepts (with all the challenges usually associated with it).

2.3. Limitations of Natural Semantic Metalanguage

Unfortunately, Wierzbicka's own proposal to employ what she calls explications using Natural Semantic Metalanguage (NSM) as a universal, pan-lingual vehicle for abstracting meanings from the languages in which they are expressed, seems to me seriously deficient in both its theoretical basis and explanatory power. NSM's claim that "the full meaning of any semantically complex expression can be stated in terms of a reductive paraphrase in ordinary language" (Goddard, 1998, p. 131) sounds not only naive and idealistic but also indefensible if we consider its epistemological foundations (for a fuller critique, see Blumczynski, 2013). Discovering or formalizing an alphabet of human thought seems as utopian to me today as it must have sounded back in the sixteenth and seventeenth centuries, when it was proposed by Descartes and attempted by Leibniz. Translation always leaves behind a 'remainder' of omitted potential significations or added potential significations; this results in a plurality of valid interpretations and indeterminacy of translation (Quine, 1960).

As much as I remain critical of Wierzbicka's method and suspicious of its theoretical underpinnings, many of her semantic analyses and discussions, especially those relating to culture-specific concepts and values, are genuinely insightful and illuminating. Wierzbicka – herself translated from the Polish to the Australian ethnolinguistic setting – is a keen observer of cultural patterns expressed linguistically; her work on conceptual ethnocentrism of English (2006, 2010) is particularly relevant to the issues of cultural exchange and asymmetries of power, including the power of knowledge(s). Clearly, it is possible to obtain valid findings whilst using not entirely adequate or poorly calibrated instruments. Ironically, Wierzbicka tends to downplay what is to me her most valuable contribution to the study of cross-cultural interaction – her personal translated experience – in an attempt to objectify it through the theory of semantic universals. In the second part

¹⁰ Available at: <https://www.epistran.org/> (Accessed: 18 June 2024).

of this article, I intend to follow exactly the direction that she neglects and explore the largely personal experience of translationality as I understand it.

3. Experiencing translationality

When you experience something (in English), you are affected by it. This points to a holistic, psychosomatic process rather than just mental awareness or intellectual acknowledgement. It is here that I would like to posit a link to Douglas Robinson's work who in his *Translationality* (2017) makes a number of partially overlapping approximations of this concept, tracing it, on the one hand, to translational medicine (and other disciplines that eagerly picked up this adjective), and on the other hand, to "Anton Popovič's ... own English translation of his Slovak term *překladovost*" (Robinson, 2017, p. ix). Paraphrasing Popovič, Robinson defines translationality as "a relation holding between the proto-[source] and meta-[target] text and having a transformative semiotic or modeling character" (ix). "Performed translationality" is his shorthand for "*felt-becoming-mobilized-becoming-performed translationality*" (p. ix; original italics). Translationality means "change, force, impact, motion, energy" (p. ix). It can also be approached as "transformationality: the constant emergingness of everything, through embodied, situated, performative interactions" (p. x). It is performed as well as "periperformed": "If literary translationality is 'performed' by writers, translators, and adapters, it is 'periperformed' by audiences, including editors and critics" (p. x). Periperformed translationality is extremely elusive but also, for the same reason, often irresistible: "it is about cultural change as an almost imperceptible 'groundswell,' as a 'watershed' without inciting events, indeed as 'reality,' as 'human nature,' as 'the way things are'" (p. x). Robinson's use of translationality is undeniably rich but also inflected towards his focus on translational-medical humanities. In the following pages, I will draw on my recent book (Blumczynski, 2023a) to sketch my own take on translationality and how it relates to experience, angling it towards several epistemic questions central for EPISTRAN.

3.1. Translation as corporeal movement

My initial premise is that for decades textual translation has been viewed as the conceptual centre of gravity for the entire discipline of translation studies. Roman Jakobson (1959) has told us that interlingual translation is 'translation proper', which implies that any other uses of this concept (for example, translating lives, people, experiences, places, and so on) must be mere metaphorical extensions of this prototype. This view is typical of what Kobus Marais calls 'lingual bias', which he exposes and challenges, most fully in his *A (Bio)semiotic Theory of Translation* (2019), arguing that translation is a complex systemic process underlying all semiosis. It is the basic meaning-making process all living organisms depend on for their survival and wellbeing, not unlike metabolism. My argument follows a different trajectory but leads to similar conclusions. The roots of the word *translation* (*trans* and *fero*), indicate a material, and often also commercial, practice of moving things as well as

words. This order is meaningful. Moving things is a more fundamental and basic practice than ‘moving’ words (which often seems to call for inverted commas).

This primary sense of corporeal movement is not only derived from etymology, but is also reflected in two related senses of the word *to translate*, nearly forgotten but still attested in dictionaries of English: (a) “To transfer or move (a bishop, minister, etc.) from one ecclesiastical post to another”, and (b) “To transfer or move (the dead body or relics of a saint, ruler, or other significant person) from one place to another”.¹¹ Now, I hope we can agree that if anything is a metaphor, it is the imaginary ‘movement’ of meanings, texts, and messages from one page and language to another. The translational ‘movement’ of texts is modelled on the physical, material, spatial – as well as symbolic and ceremonial – movement of objects, and especially bodies. As Vidal Claramonte argues, “[t]ranslating is transporting and displacing ... Translating is a constant, physical movement that causes us to go backward and forward with each new step” (2024, p. 125). To put it differently, in a diachronic perspective: as *homo sapiens*, we had been translating various people (too young, too old, too sick, or too important to move on their own; as well as their remains) long before we started translating texts.

Now, there is no doubt that textual ‘transfers’ also have a material dimension: at the very least, our reading experience is inscribed in and mediated by pages, screens, surfaces, and textures traversed (metaphorically) by our gaze and perceived (physically) by our tactile receptors. Yet we should remember that not all looking is reading, and not all objects are texts. Vidal Claramonte has explored a range of relevant aspects of material translation in three of her recent books, *Translation and Contemporary Art* (2022), *Translation and Repetition: Rewriting (Un)Original Literature* (2023), and *Translation and Objects* (2024).

3.2. Translationality as an epistemology experientially grounded in material translation

Translationality – as I understand and experience it – is part of an ecology of knowledges that challenges many of the entrenched Western distinctions drawing on classical categories, traditionally proceeding by bifurcation, excluding the middle, and rejecting partial or multiple class membership (see Blumczynski and Hassani, 2019; Blumczynski and Sadler, 2023). It is a concept that captures the various embedded, embodied and subjective forms of knowledge which are not normally viewed as scientific or scholarly, because they are messy and rhizomatic (Blumczynski, 2016, pp. 28–31; Baer, 2020, p. 234) – but are nevertheless powerful and irresistible. In short, translationality is my conceptualization of an epistemology that is experientially grounded in translation. Ancient and medieval corporeal translations of people and objects could be seen, heard, smelled and felt as genuine (or not). Even though “we communicate through each of our five senses”, since “[m]eaning is conveyed in our voice tone, accent, speech rhythm, intonation, body, movements, and many other channels (Vidal Claramonte, 2023, p. 74), in some parts of

¹¹ Available at: https://www.oed.com/dictionary/translate_v (Accessed: 18 June 2024).

translation studies, we have departed quite significantly from such an embodied, holistic, experiential, and sensory perspective. Yet, as I recently suggested elsewhere, one could argue that had this sense of translation not been marginalised by the overpowering textual focus in the history of our discipline, no ‘social turn’ ... would have been needed to remind us that translation is, above all, a social practice – it would simply be inconceivable as anything less. Likewise, a ‘material turn’ ... would have been rather unlikely and indeed unnecessary had corporeal translations been viewed as prototypical rather than peripheral, studied mostly by analogy to and in the shadow of linguistic and textual “transfers” (Blumczynski, 2023b, p. 10).

Translationality – as I understand and experience it – has a strong material component, and combines a personal and private perspective with a public and social one. Translations of influential people and sacred objects were historical processes or acts occurring in concrete spatiotemporal reality, not just in the mind or imagination. They were conducted to be witnessed, celebrated and experienced:

Using Robinson’s (2017) terminology, solemn translations of bishops and relics were not just performed but periperformed: as public events, they were partially constituted by popular attention and mass participation, effectively creating an effect of a self-fulfilling prophecy (“something extraordinary must be happening since so many people have gathered to witness it”). In the case of relic translations, that shared, material experience was mediated by the senses: by the sumptuousness of reliquaries; by powerful choral chants (special hymns were composed for the occasion of relic translations); by the smell of incense (relics were often authenticated by their reportedly “sweet scent”); by the haptic contact with the sacred objects themselves – or at least, vicariously, with people who handled them. Translationality has its roots in an individual and collective sensory experience wrapped in thick layers of symbolic significance (Blumczynski, 2023a, pp. 178-179).

This material, corporeal transfer created a perceptible sense of connection between places and communities, as church officials left one post to assume another in a different city, and sacred relics were sent by one group to another as special “gifts of friendship” (or, at other times, taken by force). Translationality is precisely the power of that experiential link; a potential to experience metaphorical travel across time and space in the presence of an object that first completed a material journey in the opposite direction.

Even though those historical uses of the word *translation* as material transfer invoke religious contexts, translationality is something much larger, and may be more mundane as well as more profound. I argue that, “[i]f translation is indeed ubiquitous, and translationality involves an experience of connecting – metaphorically, but through material, sensory mediation – with another reality across temporal and spatial distance, then we should be able to encounter it ... in various aspects of everyday life” (Blumczynski, 2023a, 180). The examples I give below are drawn from the final chapter of *Experiencing Translationality* (Blumczynski, 2023a, pp. 174–194).

3.3. Experiencing translationality in music

For several reasons, a particularly promising site for experiencing translationality is offered by music. Like other sensory experiences (such as smells or flavours), listening to familiar pieces of music often brings powerful memories of other times and places, people and relationships, moods and circumstances. These memories may sometimes be very specific: many of us have songs or compositions which carry us back in time to a single moment, particular location, special person. *Lacrimosa* from Mozart's *Requiem* carries for me a memory of a high-school sweetheart and a first major heartbreak. Pat Metheny's album *Bright Size Life* takes me back to the hot summer of 1995, an orthopaedic ward at a hospital in Wrocław, and a prolonged wait for yet another surgery. The song *Bloom* by The Paper Kites had an unexplainable, instant soothing effect on our younger son when he was a baby; we must have played it hundreds of times, often in a loop, while driving around or when putting him to bed; years later, the opening chord progression immediately takes me back to this special time in my life as a father when constant sleep deprivation was mixed with the simple joy of taking care of a new baby. I am sure that many of us who enjoy listening to music have associations similar to those, evoking other times, places, memories, and emotions. In fact, this translational power is probably one of the main reasons why we enjoy re-listening to familiar compositions. In experiential terms, this is the general principle behind any re-enactment which is effectively a translational time machine.

3.3.1. Johnny Cash's haunting *Hurt*

Some translationality effects have a truly massive scale. The video accompanying Johnny Cash's 2002 performance of the song *Hurt* on YouTube, in four and a half years, was viewed more than 245 million times (that's about 150,000 views a day!), and attracted over 90,000 comments, many of them expressing a profound sense of personal connection to the song's powerful message. What is worth stressing is that *Hurt*, contrary to popular belief, is not Cash's own song but a cover of an original composition by Trent Reznor of Nine Inch Nails, who wrote it when he was in his late twenties. The track was included in the album *The Downward Spiral*, described as "something magnificent that took you all the way to the heart of darkness" (Udo, 2019) – but it only became a global hit when it was performed by an artist of another generation, representing a radically different musical style, and nearing the end of his life, who gave the song an entirely new meaning and infused it with profound poignancy. The minimalist arrangement "revealed all the creaks and cogs in Cash's voice"; the producer Rick Rubin later said "there were times that Johnny 'sounded broken,' but they tried to turn that into a positive" (DeMain, 2022). It sounds like they succeeded. Reznor, when he first heard the record, said that "it was very strange (...) this other person inhabiting my most personal song. I'd known where I was when I wrote it. I know what I was thinking about. I know how I felt. Hearing it was like someone kissing your girlfriend. It felt invasive" (Vinnicombe, 2008). "However, it was only when the aural experience was complemented by a visual narrative that the translational link to Cash became irresistible" (Blumczynski, 2023a, p. 185): the video featuring images from Cash's life (voted as greatest

video of all time by *New Musical Express* in 2011) finally sealed that translational flow of creative material from the artist who originally wrote the song to one who almost a decade later became its ‘more original’ performer. Reznor, recalled his experience thus:

Anyway, a few weeks later, a videotape shows up (...) I pop the video in, and... wow. Tears welling, silence, goose-bumps... Wow. I just lost my girlfriend, because that song isn’t mine any more. Then it all made sense to me. It really made me think about how powerful music is as a medium and art form. I wrote some words and music in my bedroom as a way of staying sane, about a bleak and desperate place I was in, totally isolated and alone. Some-fucking-how that winds up reinterpreted by a music legend from a radically different era/genre and still retains sincerity and meaning – different, but every bit as pure (Reznor and Rickly, 2004).

What was initially a cover, a translation, has morphed into an iconic, primary, somehow ‘more authentic’ performance (certainly so when judged by the popularity of Cash’s version dwarfing Reznor’s). Such authenticity is “an experiential, pragmatically constructed notion (...) [that] may easily bypass considerations of origins, authorship, and chronology” (Blumczynski, 2023a, p. 186). *Hurt* is Johnny Cash’s poignant, extremely moving swan song – both him and his wife June died within a few months of filming – who carries hundreds of millions of online viewers back to their own pasts, both remembered and imagined, unlocking a potent dimension of self-knowledge.¹² How does this kind of knowledge fit into the broader ecology of knowledges?

3.3.2. *Translationality of the guitar*

In addressing this question, I will again draw on my own personal experience. Even though I do not consider myself a musician and certainly not a performer, experimenting with sounds and playing music bring me the most immediate sense of translationality. If translationality manifests itself in an experiential connection with another reality, time, place or person, often facilitated by material objects, the guitar is one such translational artefact for me. The fascination goes back to my childhood, one of the earliest memories of being together as a family, and the sound of my dad’s beat-up, nylon string guitar he played for me and my sister at bedtime. Forty-some years on, I can still remember some of the tunes and improvised songs in which we tried to capture the adventures of the day – even though that old guitar is no longer around. Instead, over the years, I have gathered a small collection of other guitars; none of them are very rare or expensive, but each of them connects me to a particular person, or time, or a set of circumstances. One was a gift from my sister for my 19th birthday. Another was a totally irresponsible gift to myself (money was very tight) that rekindled my love for music again, and carried me through one of the darkest times of my life. Still another was a tribute to B.B. King. Another to Carlos Santana, my guitar hero from high school – a remote time and some version of myself I never

¹² In fact, we could argue that “describing an experience as ‘moving’ is nothing else than recognizing its translationality, a power to carry you over” (Blumczynski, 2023a, p. 186).

became. There is some degree of rotation; every now and then a buy a guitar (usually second-hand), and the decision whether to keep it or not is based on this hardly describable, psycho-sensory sense of connection.

The experiential translationality of the guitar is in large part derived from its extremely corporeal makeup: it is an instrument with “a body, neck, head(stock), and a (tremolo) arm – that can be played in various positions: sitting down, standing up, and even walking around, carried by the player as an extension of his or her body” (Blumczynski, 2023a, p. 189). Given their material transferability, no wonder that guitars can be so thoroughly translational. Some evoke a symbolic link with an artist and his iconic instrument – you can have a rough sensory approximation of how it must feel to be Joe Bonamassa or Eric Clapton as you feel the shape, weight distribution, body contour, neck profile, and so on, of a Gibson Les Paul or a Fender Stratocaster, respectively. This is the familiar, marketable kind of translationality, underpinning advertising campaigns and celebrity product endorsement: many people will gladly pay money to be able to drink the same coffee as George Clooney or wear the same fragrance as Keira Knightley. Despite the dominant commercial impulse driving these sensory experiences, they also have an undeniable epistemic dimension. They offer us some direct knowledge of what it is like to taste, smell, feel, wear, hear, or watch a particular product or partake in a specific activity.

Beyond this kind of “translationality for sale” (Blumczynski 2023a, pp. 144–173) whose epistemic potential is perhaps overshadowed by its economic focus, playing musical instruments both draws on and helps build a certain kind of knowledge. Whether conceptualised as a skill, ability, or command, playing an instrument involves the body as well as the mind – and in fact challenges this dichotomy. Like any other form of knowledge, it needs to be acquired, internalized, and rehearsed. But because this experience is so thoroughly psychosomatic, with time and practice, some elements of technique may become instinctive and nearly automatic. It is not uncommon for players or music teachers to speak about their fingers “remembering” certain scales, chord shapes, or progressions. “[A] large part of learning how to play an instrument is developing this sensory, haptic prowess and gradually detaching it from a conscious mental effort; in fact, “[y]ou have only mastered a scale when you can play it perfectly amidst distractions, without actively paying attention to the progression of notes” (Blumczynski, 2023a, p. 187). In much of contemporary education theory and practice, at least in the Western world, such ways of acquiring and cultivating knowledge as memorization or rote learning have largely been abandoned, but it seems that in playing music – and possibly in some other areas of artistic and creative expression – there is no other route to fluency except by of focused repetition or persistent practice. “[S]ome people with severe dementia and Alzheimer’s disease are able to play musical compositions they had mastered in the past, even though they claim they do not know or remember them” – which demonstrates that “instrumental skills are internalized and encoded as holistic bodily operations” (Blumczynski, 2023a, p. 187). In this sense, developing what we could call “instrumental knowledge” (the ability to play a musical instrument), is not far removed from meditation exercises: a repetitious physical

or manual activity providing a reassuring sense of routine, and thus encouraging mindfulness. Based on personal experience, I can attest that even though practicing scales, passages, and phrases can at times be tedious, it can also be meditative, as “it integrates the physical and the mental, the near-automatic and the aesthetic, the repetitive and the creative” as well as “fosters a sense of ontological continuity, a processual identity, a connection with myself from another time” (Blumczynski 2023a, p. 187). I have no doubt that this kind of self-knowledge, so closely connected with sensory experience, deserves its place in a comprehensive ecology of knowledges. Translationality of this sort cannot be fully described, explained, or reduced to a linguistic account – it needs to be experienced.

4. Towards other translationalities

When I was thinking about the concluding chapter for *Experiencing Translationality*, I was not sure how much this personal, perhaps even intimate account will work in an academic monograph, but in the end I decided to take the risk and be true to myself, accepting that this is really the closest I can get to capturing my experience of translationality. Since the book was published, it has been enormously encouraging to hear that this approach had struck a chord with others. Recently, I had the pleasure of hosting a senior scholar from a highly respectable university, who on the following day sent me this personal message:

After the delicious meal and lively conversations last night, I found it hard to fall asleep ... so I read the book you gave me. Your chapter on the experience of translationality spoke to me to the core. We were earlier talking about the materiality of hobbies, and your guitars are my wood working tools: some from Italy, some purchased over time here, they connect me with the present and the past, they move me emotionally and physiologically, the biomechanics of my brain are engaged by the sensorial dimensions. Yes, you did unlock a stream of recognizable allegories, metaphors, and universal values of translationality that I can recognize at a personal level.

In conclusion, I would like to suggest that capturing this psychosomatic experience, (self)knowledge, and (self)awareness in a scholarly structure of the kind theorised by EPISTRAN – especially its strand focused on translationality – is nothing short of epistemic translation. It is my hope that this special issue of *Translation Matters* collectively and all the contributions within it will serve as a credible testimony of, and strong impulse for, epistemic and translational engagements across the EPISTRAN project and beyond.

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CO-CONSTRUCTING THE VREDEFORT DOME: THE ROLE OF MATTER-ENERGY IN EPISTEMIC TRANSLATION

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ABSTRACT: If the creation of knowledge is itself a translation process, as the call for papers for the recent Epistran Conference¹ suggests, translation studies scholars need to be able to account for this process and for the translationality (Blumczynski, 2023; Robinson, 2017) that the process entails. In my view, translation studies does not as yet have a conceptual framework that is able to explain the role that matter-energy plays in the knowledge translation process. It is true that cognitive translation studies follow the 4E approach (Ehrensberger-Dow, Gopferich and O'Brien, 2015; Garcia, 2019; Schwieter and Ferreira, 2017), but even there, there is no clear conceptual framework for how matter-energy outside of the translator's body influences the translation of knowledge. Unless matter-energy is included as a relatum in the translation process, knowledge translation will be explainable as a solipsistic human activity only, excluding living and inert matter-energy, with all the ecological implications of the latter (Cronin, 2017).

KEYWORDS: Epistemic Translation; Vredefort Dome; Semiotic Realism; Intersemiotic Translation; Semiotic Work

1. Introduction

If the creation of knowledge is itself a translation process, as the call for papers for the recent Epistran Conference suggests, translation studies scholars need to be able to account for this process and for the translationality (Blumczynski, 2023; Robinson, 2017) that the process entails. It means that scholars of epistemic translation should, among others, be clear about the onto-epistemological position(s) from which they operate. One of the onto-epistemological issues at stake in epistemic translation is the role that the 'thing' about which knowledge is created plays in the knowledge construction process. In my view, translation studies do not as yet have a conceptual framework that is able to explain the role that matter-energy² plays in the knowledge translation process. It is true that cognitive translation studies follow the 4E approach (Ehrensberger-Dow, Gopferich and O'Brien, 2015; Garcia, 2019; Schwieter and Ferreira, 2017), which argues that cognition is embodied, embedded, enactive and extensive, acknowledging the matter-energy in embodied processes of cognition. However, there seems to be no clear conceptual framework for *how* matter-energy outside of the translator's body influences the translation of knowledge. Unless matter-energy is included as a relatum in the translation process, knowledge translation will be explainable as a solipsistic human activity only, excluding living and inert matter-energy, with all the ecological implications of the latter (Cronin, 2017).

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¹ Available at: <https://www.epistran.org/international-conference> (Accessed: 13 November 2023).

² In my limited understanding of physics, it is not clear what the distinction between energy and matter is. I therefore use 'matter-energy' throughout to refer to the non-living things around humans.

Clearly, I am not the first person interested in this topic. Throughout the ages, thinkers have been engaging each other on the realism-idealism debate. Recently, in *Kant and the Platypus*, Umberto Eco provides a fascinating description of the process through which the knowledge about the platypus was constructed by the first groups of Europeans to sail to Australia, arguing that "... in the final instance, facts prevail over theories ..." (Eco, 1997, p. 249). Equally, Bruno Latour (1992) writes fascinating texts on the social work performed by doors or scallops or other non-living things. From a biosemiotic-philosophical perspective, John Deely (2009, 2014) suggests that knowledge is created through an entanglement between reality and organism. The entanglement theme is taken up by new materialists like Karen Barad to argue for the irreducibility of reality, observation, and observer in the knowledge creation process. In translation studies, Robinson (2017) considers the role of the socio-neurology of the brain in the creation of knowledge and Bennett (2023) has done foundational work in setting out the parameters of 'knowledge translation' or (inter-) epistemic translation.

In order to delve further into this issue, namely, the translational aspect of knowledge creation, I start with a description of the history of knowledge creation about the Vredefort Dome, a meteorite impact site in South Africa, using a variety of sources from the field of geology. I then explore one of the implications of this description for epistemic translation. I pay particular attention to the implications of Robinson's (2017) recent work in socio-neuroscience and Barad's (2007) work in 'new materialism' with the aim of synthesising the views into something like a 'constructive realism' or, as John Deely calls it, a 'semiotic realism', which is able to account for the role material reality (including the brain) as well as ideation play in knowledge creation.

2. Constructing the Vredefort Dome?

The narrative that I construct here is clearly a simplification of a complex and arduous historical process of about 100 years to construct the facts about the Vredefort Dome.³ It is also simplified by my non-existent expertise in geology.

³ I would like to thank Dr Martin Clark from the Department of Geology at the University of the Free State for pointing me to relevant literature and translating his expertise so that a layperson such as myself can understand some of it.



Figure 1. Vredefort's location in South Africa

The Vredefort Dome is an impact site in central South Africa where a meteorite of between 5 and 15 km in diameter collided with earth a little more than 2 billion years ago (Dressler & Sharpton, 1999; Hodge, 1994; Reimold & Gibson, 2005).⁴ It is located south-west of current Johannesburg, near the village of Vredefort. The original diameter of the crater that was formed in the impact is estimated at between 250 and 300 km, which means that the famous Witwatersrand area with its massive deposits of gold lies within its range, a point to which I return later. The initial crater could have been about 50 km deep, but it quickly collapsed, leaving a crater of about 15 km deep, which has since then been filled up. If you were to drive past or through the area today, you would not notice anything out of the ordinary, but flying over the area in an aeroplane or having access to satellite photos clearly shows the circular shape of the hills and the relatively flat centre of the dome, currently about 90 km in diameter. If you visited the hills themselves, you would observe that they were formed by upturned rock (the rock layers are more or less vertical) and its erosion – that is, if you have a basic understanding of geology.

⁴I base the narrative in this section mainly on Reimold and Gibson, so I do not cite them for every fact but will reference them on important points.

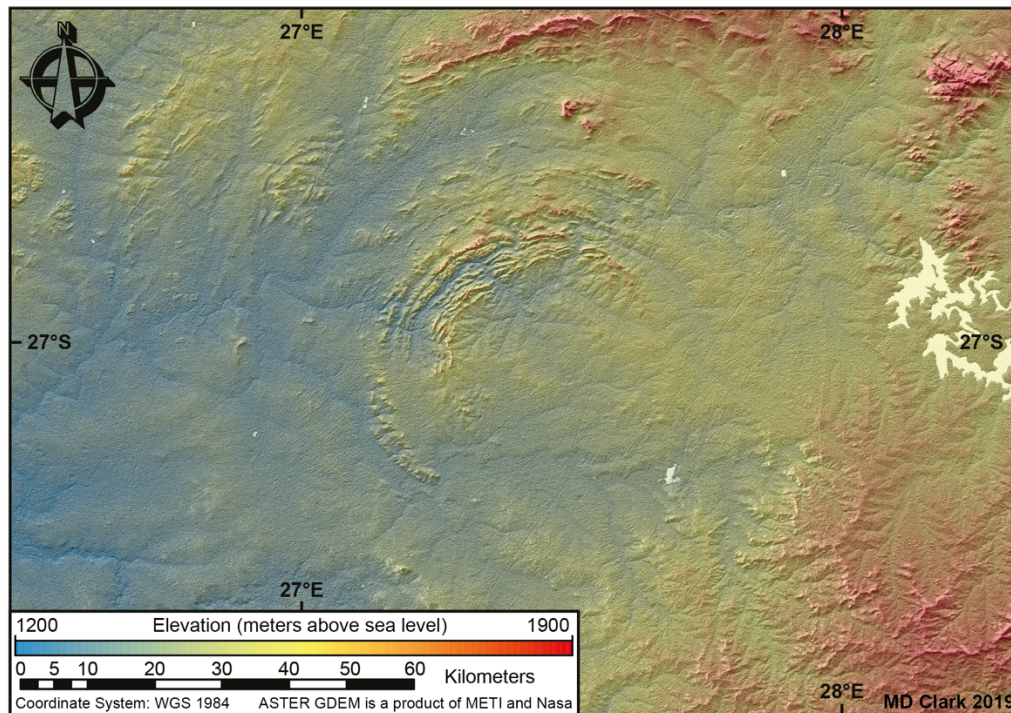


Figure 2. An aerial view of the Vredefort Dome⁵

Scientific work on the Vredefort Dome started in the 1920s when Louis Nel mapped the different rock types in the area in detail. It was realised that the rock in this area is actually from deep inside the earth's crust and that it must have been formed under huge pressure and heat. This realisation raised the question: How did this rock come to be at the surface? Two possible explanations crystallised: the dome was caused by internal upheaval, i.e., something like a volcano, or the dome was caused by external upheaval, i.e., something like a meteor. In South Africa, the internal explanation held sway until the late 1980s when undeniable evidence of meteorite impact was provided. Since the mid-1940s, interest grew in the crater structures on the moon, and the idea arose that they could be akin to similar structures on earth. When the Sierra Madera crater in Texas was drilled to a great depth, scientists found that the surface rock structures 'died out' as they went deeper, which argued against the view that the structure was created from inside the earth. In addition, Dietz argued that the conical structures of rocks found in similar structures would indicate an explosion from above. It was also found that the quartz found in these sites had to be formed under high pressure. However, in the meantime, overseas scholars also took an interest in the Vredefort Dome in the 1960s, and much work was done on the microscopic deformations in the minerals in the area. Another piece to the puzzle was the evidence about the difference in the rims of volcanic structures (from inside) and impact craters (from outside). The latter was formed by raised bedrock from deep inside the earth. With the space race in the late 1950s and 1960s, scientists had to start thinking about the influence of shock waves on the materials of the vessels they wanted to send into space.

⁵ Clarke Martin, Department of Geology, University of the Free State. Personal communication on 8 May 2024.

This line of thought brought together three lines of evidence: “information about rock deformation sustained under ‘normal’ geological conditions, from suspected impact structures, and from experimentally deformed rock” (Reimold & Gibson, 2005, p. 140). This led to the formation of the concept of shock metamorphism. It was demonstrated that many impact structures showed evidence of shock waves, which meant that during the 1960s the Vredefort Dome case was closed in international research. For them, Vredefort was caused by impact by a body from outside of earth.

In South Africa, however, the internal explanation still held. One of the reasons for this was that attempts to date the Dome offered confusing results. The outer granite rock dated at about 3080 million years while the inland rock dated at about 2800 million years. This suggested that there was more than one deformation. The geology and geophysics of the wider Witwatersrand area was then also linked to the Vredefort Dome. In 1987, an international conference on the Dome was held in South Africa. The conference could not concur on an explanation, but one of the benefits of the conference was strengthened collaboration between South African and international geologists. In 1993, Hugue Leroux provided evidence that settled the matter. He found proof (at the Dome) of a crystal called ‘Brazil twins’ which can only be formed from hot aqueous solutions, which did not occur in Vredefort, or can be ‘caused by enormous pressure of a shock wave running through the mineral’ (Reimold & Gibson, 2005, p. 150). In addition, he found traces of a mineral that could only have originated in a meteorite, not on earth. Thus, Reimold and Gibson (2005, p. 154) concludes: “It [settling the arguments about the origins of the Vredefort Dome] involved the synthesis of numerous observations and analytical data from a range of disciplines, including mining geology, structural and metamorphic geology, geophysics, geochemistry, geochronology and minerology, just to name a few”.

In addition to the massive body of geological information that can be inferred from the Vredefort Dome, it also offers substantial information about human settlements. Evidence of settlement during the Middle and Late Stone Age, i.e., from between 200 000 to 2000 years ago, has been found. The caves that resulted from the meteorite impact offered shelter to early settlers. The area is also rich in water, with the Vaal River having carved a winding route through the Vredefort Dome, and plant and animal life, providing a fruitful environment for humans. In addition, there is evidence of settlement during the Iron Age, as well as modern settlement.

In terms of geology, the meteorite impact that caused the Vredefort Dome impacted not only the visible dome of about 80 km in diameter. Its impact can be seen in an area with a diameter of about 300 km. Geologists argue that the gold deposits of the Witwatersrand is a direct effect of the meteorite impact in that the upheaval caused very deep gold deposits to be moved closer to the surface of the earth. In other words, the meteorite impact did not only cause effects in the earth’s geohistory, but also in South Africa’s political and economic history. Here one can think about the gold rush in the late 1800s, the Anglo-Boer War that revolved around the control over these riches, the migrant

labour that was caused by a need for labour that disrupted indigenous South African social life, and many more.

My point here is that, as much as the Vredefort Dome was constructed by a meteorite and as much as knowledge about it has been constructed by scientists over roughly a century, the Dome also constructed living space for Stone and Iron Age settlers. It would probably be too strong an argument to say that it constructed South African history, but I think we have enough evidence to argue that it co-constructed some of the propensities for the South African history to take the trajectory it did. As a counterfactual argument, South African history without rich gold deposits at mineable depths would probably have emerged quite differently. Thus, as much as the materiality of the Vredefort Dome contributed to understanding its origin, it also contributed to historical trajectories in South Africa.

The question now remains: How do we explain the epistemic translational aspect in the co-construction of/by the Vredefort Dome? To this I turn in the next section.

3. Epistemic translation: Opposing perspectives

I explain in the next section how I think scholarly work is a translation process, which means that, for now, I just assume that it is. In this section, I investigate two seemingly opposing ends of the continuum on thinking about epistemic translation. On the one hand, I consider the Kantian postmodernist approach of Douglas Robinson (2017). On the other hand, I explore new materialist work, focussing mainly on Karen Barad (2003, 2007).

Bennett (2023, p. 443) argues that all knowledge is created through a translation process where existing knowledge is "... repackaged and reworked in accordance with new cultural and ideological configurations". This process entails interlingual, intralingual and intersemiotic translation, as well as "inter-epistemic translation" (Bennett 2023, p. 443). I am not convinced by Robinson's (2017) argument that inter-epistemic translation is a fourth kind of translation as it seems to be a sub-category of intersemiotic translation, or if one takes a semiotic definition to translation (Marais, 2019, pp. 61, 120-142), merely a sub-category of translation. That said, inter-epistemic translation is clearly an important domain of translation that requires attention (Bennett, 2007, 2011, 2013, 2015; Robinson, 2017).

Bennet rightly argues that inter-epistemic translation is interested in "... the processes involved in creating and disseminating knowledge at different times and places" (2023, p. 444). As much as the dissemination is important, and as much as Bennett has made insightful arguments in this regard, my focus in this paper is on the translational aspect of knowledge creation. In other words, my argument is that not only translation between existing epistemic systems should be regarded as relevant for translation studies. Rather, the creation of knowledge and knowledge systems themselves entails translational action or work. To make this argument, one first needs a constructivist theory of knowledge creation, for which I turn to the work of Douglas Robinson.

3.1 Neuro-social hermeneutics

Douglas Robinson has bequeathed translation studies with not only a large body of writings but a valuable one at that. His work aims at explaining the hermeneutic process that is (mostly interlingual) translation. He has consistently criticized rationalist, Western-dominant explanations of translation (Robinson, 1991, p. 260), and in its place, he suggested a detailed embodied social-constructivist hermeneutic approach, based in social neuroscience, to translation (Robinson, 2017). This means that Robinson's approach is a rich and detailed epistemology that links insights from neuroscience, translation studies, hermeneutics, sociology/social psychology, and literary theory, among others. His approach has the added benefit of broad yet detailed explanatory power in that it is able to link explanations of social process to explanations of neurological process. This epistemology, Robinson (2017, pp. 118, 133-135) states, is looking for a middle ground between constructivist and objectivist positions, by situating the constructivist agency in the material brain. In this sense, one could therefore describe Robinson's framework as materialist because he studies embodied cognition, as evidenced by his reliance on affect theory and neuroscience. I argue below that Robinson's approach misses one crucial point for epistemic translation, namely the question about the role matter-energy plays in knowledge creation, but his is clearly not a naïve idealism/constructivism. On some occasions, it does indeed seem to be naive, like in the following quote with its strong rhetorical claims concerning 'everything' we know and 'nothing' that is true:

Everything we know about the brain makes it clear that nothing we believe about our access to "objective" "reality" is true. (Robison, 2017, p. 34)

However, Robinson (2017) concludes his book with a thoughtful consideration that is much closer to the kind of epistemology that I think is needed for epistemic translation – an providing context for the overclaim in the previous quote:

It is faith in science as explanations that keep changing, because no explanation is ever the objective truth, and our attempts to reach through the conflicting evidence of our senses to "objective truth" invariably fail, to one degree or another, because the material world beyond our periperformative constructions keeps resisting us, keeps pushing back against our cultural grids and maps, thwarting our efforts to synthesize, consolidate, build elegant models of "reality" – but also providing us with our best clues as to what that world is actually like. (ibid., p. 203)

His reference to "the conflicting evidence of our senses" does indeed allow, in this formulation at least, for influence from matter-energy, for pushback against our constructions, but it does not explain in more detail what this would entail. I do not see much debate needed about 'objective' truth, except about what the definition of objective might be. I think we can agree that all knowledge is preliminary and relative to a number of constraining factors. I also think there can be little argument about knowledge as being constructed – and constructed both bodily and socially.

However, as much as Robinson has made a large and immensely valuable contribution to translation studies, epistemic translation poses a question that his work seems unable to answer. It is the simple question: What is the role of matter-energy in the knowledge we have about matter-energy. This question, to my mind, is crucial when we want to think about epistemic translation. If knowledge is about something, we need to be able to explain the role that this something plays in co-constructing that knowledge, and for that we need more than an anthropocentric, solipsistic, postmodern Kantian idealism/constructivism. If the something that we are to know is a subject in its own right (Deely, 2009) we need a conceptual framework that not only acknowledges its existence but is also able to explain, despite all the legitimate provisos, what the role of that something is in epistemic translation. Eco (1999) makes the point that knowledge creation starts out as a translation process of turning things into the objects of our knowledge, which means that all knowledge entails epistemic translation. Therefore, Robinson's (2017) view, that there is no recourse to brain-external reality in epistemology and that 'truth' is (only) a matter of plausibility as distributed in a society is too simple for epistemic translation purposes:

An *icosis* or *ecosis* is a socioaffective ecology of value (good and bad, honor and dishonor, glory and shame, approval and disapproval) that turns the somatic exchange into a collective engine of reality-construction/-periperformance (*icosis*) and morality-construction/-periperformance (*ecosis*). (Robinson, 2017, p. 186)

For Robinson, truth is a matter of value and seems to have nothing to do with the thing that a truth claim is about. Let me state, before going further, that I am well aware of the intricacies of the idealism-realism debate, and like Robinson, I am looking for a way to reconcile these two epistemological positions in a nuanced synthesis. I also think that Robinson goes a long way in doing so, but as suggested above, I think his framework is still predominantly idealist/constructivist because of his reticence for allowing matter-energy to constrain our experience, or at least for his lack of explaining the role of matter energy, apart from the brain, in knowledge creation. In typical humanist fashion, for Robinson (2017), the human has to be the agent and our knowledge of matter-energy is a mere projection:

So what is the answer? If we begin not with objectivist theories of causation but at the other end, with Kantian constructivist/periperformativist theories of mimetic projection, it all makes more sense. The empathic connection between author and reader, via the text, is a *projection*: the reader projects it onto the author. It is an empathic construct. (ibid., p. 138)

The Other, whether another human animal, a non-human animal, a text, or some other form of matter-energy, has no constructive power in Robinson's explanation of knowledge creation, a point against which new materialists rally, as I show below. For Robinson, the Other seems to exist in my mind only as projections created by my brain. To be fair, as also argued above, Robinson does seem to have a sense of this problem because one finds

references to the role of matter-energy in epistemology, but they are few and far between, for instance:

Sense-data move through our sensory apparatus to our central nervous systems, and there are translated not only into a coherent picture of reality but a coherent picture of reality *shared by other members of our culture*. (ibid., p. 182)

As we shall see when discussing new materialism, they call this “sense-data [that] move” the agency of materiality. I am not yet sure how far one needs to take the ‘agency’ of matter-energy, but I think we have good neuroscience evidence (Juarrero, 2023, pp. 164-166) to argue that at least some of our thoughts are influenced by matter-energy, in whichever form, from outside our bodies.

In other words, as an epistemology, I think Robinson’s proposal holds much value and does indeed move use forward through its innovative use of social neuroscience. However, his version of translation studies lacks an ontology, which is to be expected from a good Kantian as seen in the following formulation:

Icosis and ecosis are socioecological versions of post-Kantian social constructivism/ periperformativism, based on Kant’s “Copernican Hypothesis” that we do not simply “register” the objects around us but actively (if unconsciously) *construct/ periperform reality*. (ibid., p. 182)

In summarising a long chapter on his icotic theory of hermeneutics and translation, Robinson concludes as follows:

The things that the humanities study, and the orthodox methods they have evolved to study them with, are organized icotically; but the evolution of those methods in each humanistic discipline, subdiscipline, and interdiscipline is also organized icotically. (ibid., p. 119)

The question that the quotation above raises is: What are ‘the things that the humanities study’? Robinson does not specify these things, but I would suggest that he means that the humanities studies ideas and society-culture that has been constructed by humans. As much as I would agree, the question is: Is this all that the humanities studies? In a cogent argument, Maran (2020) criticized the Western humanities tradition for assuming that humans live in the symbolosphere, i.e., language and ideas, only. Biosemiotics has not only shown the use of signs in all living organisms but also that the dividing lines between human animals and other organisms are not as clear-cut as they have been assumed. I would therefore argue that, in addition to ideas and society-culture, the humanities (should) study the materialities from which ideas and society-culture emerge and the ways in which human existence is entangled with matter-energy of various shape and form. The question is not only how the embodied and material nature of the brain and the nervous system constrain knowledge creation. As much as we should argue that our knowledge about reality is never objective and always shaped by our bodily experience, for certain types of knowledge, we need to understand the object of our knowledge well enough to be able to

act safely on our knowledge. To put it simply, our knowledge cannot just be construction willy nilly. It has to be construction of something, and because the construction is in relation to the somethings, that something needs to have an influence on the construction because getting it wrong might have disastrous consequences. Knowledge is constructed, for sure, but the 'thing' that we know needs to constrain the construction because of pragmatic consequences if it does not. Knowing fairly accurately, not positivistically and objectively, how much kilowatt you need to keep an aeroplane carrying 500 people in the air is important, at the very least for those 500 people and their families. Robinson might object that building aeroplanes is not what the humanities studies, but the humanities does study the creation of the knowledge that underlies the building of aeroplanes, and the implication is that a theory of translation that reduces onto-epistemology to epistemology will not be able to study epistemic translation.

3.2 New materialism

New materialism is a multi-faceted onto-epistemological framework within which to study social-cultural phenomena, and it mainly responds to the idealism that underlies constructivism by considering the role of matter in the emergence of society-culture. Leading scholars in this approach are Deleuze and Guattari (1987), Latour (2007), though he would probably not have called himself a new materialist, DeLanda (2006, 2013, 2015, 2016) with his assemblage theory, and Barad (2007), who combines physics and feminist theory, as well as feminist scholars like Harroway, Braidotti, and Butler (interviewed and discussed in Dolphijn & Van der Tuin, 2012) for an overview and rich reference list). While showing similarities with Marxist materialism, new materialism also differs significantly from Marx (Cheah, 2010; Choat, 2018; Coole & Frost, 2010; Lettow, 2017). The point that I am trying to make in this section, and for which I harness new materialist thought, is that we might enhance our thinking in and about the humanities if we operate with a conceptual framework that explains how matter-energy constrains our thinking. In the next section, I try to work out the 'how' of this matter in more detail.

Here, I focus briefly on Barad's complex and rich contribution because of her background in physics and the dialogue she stimulates between the natural sciences and the humanities. A first point of interest would be Barad's insistence that, for all scholarly work, one needs both ontology and epistemology, which is why she works with an onto-epistemology (Barad, 2003, 2007; Fox & Alldred, 2018; Gamble, Hanan, & Nail, 2019; Juelskjaer, Plauborg, & Adrian, 2021; Monforte, 2018). As a trained physicist, Barad bases her conceptualisation on Bohr's theoretical insights into the wave-particle problem. Experimental physics has shown that light exists as both particles and waves but that one cannot observe both at the same time. This problem has been described as the uncertainty principle, but, based on Bohr's interpretation, Barad argues (2003, p. 815, 2007, pp. 108-130) that it is a matter of indeterminacy or complementarity (Dolphijn & Van der Tuin, 2012; Gamble, Hanan, & Nail, 2019; Juelskjaer, Plauborg, & Adrian, 2021), not primarily uncertainty. In other words, it is not a matter of the observer being uncertain about the

observation but rather a matter that the observed (reality) itself is indeterminate, even when limited or decided through the act of observation. Thus, observer and observed are entangled in a complementarity relationship, and both contribute to the construction of knowledge.

Barad therefore argues that we do not observe things as they are but neither do we construct the things we observe. Rather, we observe ‘phenomena’ or ‘entanglement or the inseparability of the apparatus and the observed object’ (Dolphijn & Van der Tuin, 2012, p. 61). Elsewhere, Barad (2003, p. 814) formulates that we observe “the *phenomenon*—the inseparability of ‘observed object’ and ‘agencies of observation’” and that a phenomenon “consists of relationships, not entities” (Barad, 2007, p. 16) (emphasis original). Observation is therefore neither realist (the thing observed determines the observation) nor idealist (the observer determines the observation) but a relationship between observer and observed in which each act as agent with different impact, which is why Barad (2007) calls her approach “agential realism”. Observers create phenomena through what Barad (2007, p. 815) calls ‘intra-action’: “The notion of *intra-action* (in contrast to the usual “interaction,” which presumes the prior existence of independent entities/relata) represents a profound conceptual shift.”

In my understanding, Barad is trying to argue that observers (as pre-existing things) do not interact with the observed (as pre-existing things). This would mean that, in Barad’s (2003, p. 815, 2007, p. 334) view, “relata do not preexist relations; rather, relata-within-phenomena emerge through specific intra-actions.” As part of her radical process-philosophical approach, she argues that the intra-actions themselves perform or enact the observer and observed, i.e., both are becoming through the process of intra-action. In other words, observation is not an interaction “in between” things that are already demarcated but an intra-action “between” things (Dolphijn & Van der Tuin, 2012, p. 14) that become (demarcated) through the action and that can be demarcated differently in different observations. Also, observers are not things of a different category than the observed, i.e., both are material-energy. Rather, the difference between observer and observed is intra-acted through an agential cut that creates observer and observed and separates the two:

A specific intra-action (involving a specific material configuration of the ‘apparatus of observation’) enacts an *agential cut* (in contrast to the Cartesian cut—an inherent distinction—between subject and object) effecting a separation between “subject” and “object.” (Barad, 2003, p. 815)

Put differently, the act of observation is a process during which subject and object are separated for that observation and that observation only. In another observation, the separation or demarcation can take place differently. This means that neither subject, nor object, nor observation is ever reified. Barad (2003) formulates it in the following ways:

In my further elaboration of Bohr's insights, apparatuses are not mere static arrangements in the world, but rather *apparatuses are dynamic (re)configurings of the world, specific agential practices/intra-actions/performances through which specific exclusionary boundaries are enacted*. (p. 816) (emphasis original)

Agential intra-actions are specific causal material enactments that may or may not involve "humans. (p. 817)

Reality is not composed of things-in-themselves or things- behind-phenomena but "things"-in-phenomena. The world *is* intra-activity in its differential mattering. (p. 817)

Whether one thinks about observation with technological apparatus or with the biological sensory apparatus afforded to living organisms, observation entails the intra-action between two material systems, reconfiguring the world according to the constraints that drive the apparatus. This holds for all living organisms, not only humans. We, as material reality, exist in relation to one another, and our intra-actions leave material marks on one another, and those material marks matter. The material marks, the differences that make a difference *à la* Bateson (2002), are what we relate to when we try to interpret their significance for our entangled existence.

For all its possible warts, e.g., vitalism (Gamble, Hanan, & Nail, 2019), not being critical enough (Cheah, 2010), and espousing agency (Fox & Alldred, 2018), new materialism makes a convincing argument, in my view, that humanities research needs to find a way to include matter-energy in its considerations. In order to take matter seriously, one cannot reduce it to epistemology. When Barad (2007, p. 59) emphasises the agency of matter, she gets very close to a new-vitalist position. As much as I think ascribing life-like or human-like attributes to inanimate nature might just be another form of anthropocentrism and does not help us to investigate the ways in which inanimate matter became animate, sentient life, I think new materialism has a point in arguing that matter is constructive, in the sense that it brings forth new things (Gamble, Hanan, & Nail, 2019, p. 123), or at the very least, allow for new things to come forth. I would probably not use the term 'agency' for inanimate matter, but the point is that it is matter-energy that brought about 'nature' as we know it today, and it is matter-energy that brought about human beings. New materialism emphasises the fact that we, as human beings, are nature, matter-energy – apart from everything else we are.

New materialism has brought matter-energy back on the humanities agenda in a challenge to the idealist/constructivist epistemology that currently dominates, as espoused above by Robinson. In my view, these two approaches should not be binary opposites, which is why my aim with the rest of this paper is to try to synthesise these approaches. For now, I suggest that we explore the value a semiotic approach could have for such a synthesis.

4. How knowledge is created through translation: A complexity perspective

In Peircean terms, awareness of something, i.e., registering sensory input, remains at the level of Firstness unless an organism thinks further about what it is that the organism has become aware of. In other words, as much as meaning-making or thinking starts with

awareness, the awareness in itself does not yet mean anything. The awareness has to be related to what Peirce calls an object, i.e., that for which the something that one has become aware of stands. It is only when representamen (the initial something that one became aware of, the something that stands for something else) and object (the something for which the representamen stands or which it represents) are related that an interpretant (what it means – the cognitive import – for the observing organism) can be formed. Peirce calls this process through which a representamen, object, and interpretant are related ‘translation’. In other words, it is a process that starts with a representamen and ends at an interpretant, involving the role of the object as mediated by the representamen.

The implication of this line of thought would be that one of the issues in epistemic translation is the determination of the object. Observing (becoming aware of) something for the very first time, means that, semiotically speaking, an observing organism deals with a representamen without an object. Phenomenologically, it would probably be more correct to say that the organism deals with a representamen for which the object is ‘unknown’, leading to an interpretant such as “I haven’t got the foggiest clue as to what this is”. The semiotic process could stop there, and the organism can move on without worrying about the unknown anymore. Alternatively, a process to grow an understanding of what the representamen stands for can start. This is why I argue that epistemic translation, or the creation of knowledge, is a process of expanding interpretants by obtaining more information about the object as mediated by the representamen.

There is a sense in which Peirce argues that the object determines the representamen. I would use less deterministic words, suggesting that the object constrains the representamen:

I define a **Sign** as anything which on the one hand is so determined by an Object and on the other hand so determines an idea in a person's mind, that this latter determination, which I term the **Interpretant** of the sign, is thereby mediately determined by that Object. (CP 8.343), see also CP 8.335) (emphasis original)

Be that as it may, Peirce seems to suggest that the semiotic process has its origin in the object, which in our case of an unknown thing above, is absent. The goal of creating an interpretant then has to include a process of getting to know more about the object, which is the translation process known as epistemic translation. Hence, epistemic translation is, amongst others, an effort to create pragmatically efficient interpretants of an object.

In his semiotics, Peirce distinguishes between two types of objects, namely, an immediate object and a dynamic object:

Namely, we have to distinguish the Immediate Object, which is the Object as the Sign itself represents it, and whose Being is thus dependent upon the Representation of it in the Sign, from the Dynamical Object, which is the Reality which by some means contrives to determine the Sign to its Representation. (CP 4.536)

The immediate object thus entails the knowledge/memory that the observing organism has about what the representamen stands for. This means that the immediate object is always internal to the organism, i.e., an idea, a feeling, a memory, etc. This holds irrespective of whether the dynamic object is mind dependent or mind independent. It is the Kantian idea to which Robinson refers and which he explains so well. Peirce is, however, clear that a representamen does not necessarily allow a sign user to infer everything relevant about the object:

We must distinguish between the Immediate Object, -- i.e. the Object as represented in the sign, -- and the Real (no, because perhaps the Object is altogether fictive, I must choose a different term, therefore), say rather the Dynamical Object, which, from the nature of things, the Sign **cannot** express, which it can only **indicate** and leave the interpreter to find out by **collateral experience**. (CP 8.314) (emphasis original)

Apart from deducing from the representamen, the observer also needs to find 'collateral experience', in other words, the observer has to construct dynamic objects for this representamen that includes more information than the original 'unknown'. This means that the sign process is not solipsistically enclosed in itself but an open system of meaning-making that do, in certain cases, require engaging with 'not-yet semiotised reality'. In other cases, as Robinson makes clear, sign processes engage with existing sign processes. The richness of potential meaning in the representamen is not indicated in the representamen itself, but has to be constructed, sometimes over many years and even millennia. As much as it is difficult to semiotize the dynamical object (CP 4.539), and as much as both Robinson and Barad correctly argues that this semiotization is never absolute or objective, it is one of the ways in which new knowledge is created.

In Peircean thought, one therefore also has the dynamical object, which for Peirce is the brute existence in nature that, in his words, determines the representamen – in my words, constrain the representamen:

As to the Object, that may mean the Object as cognized in the Sign and therefore an Idea, or it may be the Object as it is regardless of any particular aspect of it, the Object in such relations as unlimited and final study would show it to be. The former I call the **Immediate** Object, the latter the **Dynamical** Object. For the latter is the Object that Dynamical Science (or what at this day would be called "Objective" science,) can investigate. Take for example, the sentence "the Sun is blue." Its Objects are "the Sun" and "blueness." If by "blueness" be meant the Immediate Object, which is the quality of the sensation, it can only be known by Feeling. But if it means that "Real," existential condition, which causes the emitted light to have short mean wave-length, Langley has already proved that the proposition is true. So the "Sun" may mean the occasion of sundry sensations, and so is Immediate Object, or it may mean our usual interpretation of such sensations in terms of place, of mass, etc., when it is the Dynamical Object. (CP 8.183, see also CP 5.473; 8.314; 8.343) (emphasis original)

I am aware that there are Kantian interpretations of Peirce's dynamic object, Robinson for instance, but I base my argument here in Deely's (2001, 2009, 2014) semiotic realist interpretation of the dynamic object. In his magnum opus, Deely (2001) goes back to the

Scholastic distinction between mind-dependent and mind-independent reality.⁶ There are things that exist in the world irrespective of whether they are known or not. These are called mind-independent reality or '*ens reale*', in the Latin of the Scholastics. Other things, such as unicorns, are created by minds and exist only in the mind. As much as they are based on or derived from either inanimate or animate things, and therefore related to matter-energy, they do not themselves exist materially but only as the creation of the mind of a living organism. They only exist in a mind-dependent way, i.e., they depend on a mind for their existence. Deely expands this difference further in his distinction between things and objects. Things are mind-independent existents, or '*ens rationis*' for the Latins. Objects of thought can be both mind-independent and mind-dependent existents. This means that things become objects through a semiotization process, which I here call epistemic translation. In Deely's terms, everything we know are objects. Some of these are only objects, i.e., they exist mind-dependently only, but some objects of our knowledge are also things, i.e., apart from their existence in our minds, they also exist mind-independent. Put differently, some things exist as either *ens reale* or *ens rationis* only, but some things have a double existence, partaking in both the matter-energy world and the semiotic world. For Deely, things exist subjectively, according to their own being, but they are known objectively as objects of our thought.

Deely's unorthodox use of the terms subjective and objective does not overlap with its common use in epistemology. For Deely, things exist as subjects in their own right, hence they exist subjectively. When we know them, we know them only as objects of our thought, hence we know them objectively. This is contrary to the common use of subjective and objective that takes the human knower as point of reference.

As much as the immediate object is always of the nature of '*ens rationis*', the dynamic object could be either of the nature of '*ens rationis*' or '*ens reale*', i.e., either mind dependent or mind independent, either pure object or thing-turned-object (Deely, 2009, 2014). Now, the relation between dynamic object, immediate object, and interpretant is really complex. If all of them are of the nature of '*ens rationis*', e.g., I am thinking about a unicorn, they are clearly all of an ideational and mind-dependent nature, and they are all clearly constructed by me as the constructing semiotic agent. However, if I observe a mind-independent thing, the thing itself, its subjectivity in Deely's terms, constrains the semiotic process through which I turn it into an object of my thought. The object of thought is constructed, no debate about that, but it is constructed relationally by allowing the subjectivity of the thing to constrain my construction. Things-turn-objects thus participate in a complex onto-epistemology. They are both mind-independent things (subjectivities) and mind-dependent objects (objectivities) that are woven together, creating the fabric of experience, according to Deely (2009).

⁶I acknowledge Piotr Blumczynski for pointing out that Deely's distinction might be too binary. As much as I agree that one might need to revisit Deely through a complexity lens, I do not have the space to do that here, but it is a point that needs clarification.

This conceptualisation means that, as much as the construction of the Vredefort Dome in geology is a creation, an immediate object, the materiality of the Dome itself had an effect on this construction. When the materiality of the dome clashed with the construction, e.g., that it was of volcanic origin, the construction had to be adapted, which is probably why it is called science and not fiction. Now Robinson is also correct in arguing that the line between fiction and reality is blurred, but that does not logically necessitate deleting the line. Living with a blurred line is the complexity response to the complexity of reality. Trying to enforce or delete the line is the reductionist response to the complexity of reality. Deely agrees that it is impossible to stipulate where reality ends and construction starts, and in cases like literary creations it is not really relevant. However, in many cases in the world, it is relevant. Is there a deadly poison in the cup of tea handed to me by my mortal enemy? Will the design of this aeroplane hold 500 people in the air between Johannesburg and Zurich? Will this medication cure my cancer? In all of these cases, the materiality of the thing under discussion is crucial for my survival, which means that the immediate objects that are related to them somehow need to account for, or allow themselves to be constrained by, the materiality of the things themselves. In other words, if the materiality of the Vredefort Dome did not matter, if knowledge about it is as fictional as any Mills and Boons, why do sciences exist and why did it take scientists about 100 years to construct their 'fiction' of the Vredefort Dome? Why did they not just agree on the first fiction? Both explanations, i.e., internal and external upheaval, are plausible in Robinson's terms, but the plausibility did not settle the matter, the matter-energy constraints did.

In the history of epistemology, various terms have been used to explain what is meant by 'needs to take them into account' in the previous paragraph. It was claimed that signs should 'represent' reality, signs should be 'true' to reality, signs should 'reflect' reality, signs should 'copy' reality, signs should 'resemble' reality, signs should 'be in accordance' with reality, signs should 'correlate' with reality, and many more. These terms have rightly been criticized for assuming a one-to-one relation between semiosis and reality. However, the criticism has, to my mind, been overstressing its logic by trying to erase any relationship between semiosis and reality. At this point, my best effort at a non-positivist/objectivist, non-constructivist/idealist, non-reductionist conceptualisation would be that scientific semiosis needs to relate to both mind-dependent and mind-independent reality in a pragmatically relevant way. In this process, scientific semiosis needs to allow mind-independent reality to constrain its epistemological constructions. In other words, there would be cases where as close to absolute equivalence between immediate and dynamical object is required, e.g., the aeroplane. There might be cases in which as little equivalence is required, e.g., a fairytale, and there would be many cases in between. The point is, if we want to understand the subjectivity of things, the way they are, we can never do that in an absolute way. However, if we try to understand it as best we can for the pragmatically determined intent that we are trying to understand it, we have to reckon with the materiality of the thing.

Linking back to new materialism, I would argue that living organisms, including humans, live in a state of entanglement with other living organisms, e.g., ecologies, societies or cultures, and non-living matter. However, they also live in states of entanglement with inanimate matter-energy, e.g., sunlight, rain, oxygen. Non-living matter and living matter are both matter, organised differently, but still matter. A semiotic materialism or semiotic realism in Deely's terms provide us with a way of explaining this entanglement rather than reducing it to either matter or mind. Semiosis is the process through which mind and matter relates, entangles.

Apart from an epistemological motivation, there is also an ethical motivation for reckoning with the 'thing'. The thing is, ethically speaking, and Other. Constructivism, even social constructivism, runs the risk of placing so much emphasis on construction that the other tends to become 'my construction'. In my view, this is not an ethical approach. Whether the other is mind-dependent or mind-independent, I need to show respect, ethically speaking, to the Other. In my view, it is exactly the solipsistic tendencies in Kantian thought that is, among many other things, responsible for the inability for people to listen to each other and for people to listen to nature, hence the ecological crisis.

5. Conclusion

To conclude, if one assumes that epistemic systems exist and that one does not need to explain how they came to be, explaining inter-epistemic translation is enough and will be able to account for what needs to be accounted. However, if one does not assume the existence of epistemic systems but thinks that their existence needs explanation, you need a conceptual framework within which to explain epistemic translation. In other words, if epistemic translation is to contribute to more than a solipsistic circulation and recreation and adaptation of existing knowledge systems, it needs a theory of open systems. I hold the latter position and therefore suggests, in an adaptation of my earlier conceptualisation of translation (Marais, 2019) that epistemic translation is a subcategory of translation, defined as a semiotic process, that entails the negentropic semiotic work performed under a complex of constraints, including matter-energy constraints where needed. Part of this translational process entails turning sensory data into knowledge, turning things into objects of thought, semioticing matter-energy.

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BOOK REVIEW

TRANSLATING SCIENCE, YESTERDAY AND TODAY

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Traduire la science : Hier et aujourd'hui, Pascal Duris (ed.), New edition [online]. Pessac: Maison des Sciences de l'Homme d'Aquitaine, 2008, 234 pp, €54,99 (paperback) ISBN : 978-2-85892-495-0, €11,99 (e-book) ISBN 978-2-85892-495-0¹

Published in 2008, this book brings together contributions to a conference that took place in 2006 in the context of the research project *Le livre scientifique. Définition et émergence d'un genre (1450–1850)* [The scientific book. Definition and emergence of a genre (1450–1850)]. The volume, *Traduire la science: hier et aujourd'hui*, [Translating science: yesterday and today], which shares its title with the conference, deals primarily with translations and translators, past and present. The focus on translation is intriguing, suggesting perhaps that the research group found translations to be a key factor in the development of the scientific genre. This would be in line with Halliday and Martin's assertion (1993) that the scientific genre was developed intentionally alongside the scientific revolution.

The aim of the book, as set out in Duris and Ducos's Introduction, is to “offer a cross-section of perspectives on history (of science or ideas) from linguistics, philosophy and literary studies, on the work of translation in different periods and across different scientific fields (astronomy, botany, physics, chemistry, etc.) and on its actors”.² The eight chapters indeed explore epistemological questions related to translation and science in a series of case studies ranging from the Middle Ages to the present day. However, in terms of the scientific disciplines discussed, four of the nine chapters discuss natural history (ch. 2, 5, 6, 8), while others tackle astronomy (ch. 3, 9 and appendix) and physics (ch. 4). It would be near-impossible to bring together in a single-work studies of all scientific disciplines (however these are defined) from such a vast timeframe, but since almost half of the contributions in this book relate to natural history, one cannot help but feel a sense of imbalance. Personally, I was disappointed not to find a chapter discussing chemistry, despite Thierry Hoquet pointing out in his chapter that the reform in scientific language at work at the time of Linnaeus (his object of study) also affected chemistry, crystallography and anatomy.

Translation is explored broadly within these chapters. The introduction emphasises the multidimensional role of scientific translators through history, highlighting that “in

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¹ Available at: <https://books.openedition.org/msha/8706?lang=en>

² All translations from this French book are my own.

addition to their role as interpreters, they needed to make accessible to their readers new theories, concepts, terms and nomenclatures that were still being debated. They became in turn annotators, commentators, editors, illustrators and popularisers, according to the trends of the time.” While the authors tend to consider these operations as supplementary to the core act of translation, we might just as easily consider them translational processes in and of themselves. Indeed, many of the chapters would not be out of place in this special issue of *Translation Matters* on (Inter-)epistemic Translation, as we will see.

The conference on which the book is based was held at the *Maison des Sciences de l’Homme d’Aquitaine* [Aquitaine Human and Social Sciences Research Centre], which also published the work. The eight contributors are all prominent researchers in French universities, and four work or were working at *Université Bordeaux Montaigne*, in the Aquitaine region. The limited number of contributions and the relatively limited geographical provenance of the contributors suggest a relatively low interest in this kind of scholarly discussion at the time of publication, which is regrettable for such fascinating subject matter.

The Introduction, authored by the book’s editor, Pascal Duris, alongside Joëlle Ducos, outlines the scope of the book and highlights the difficult role of the science translator through the centuries: a role made difficult primarily by the introduction of new ideas and new language created to express these ideas. The difficulty lies therefore in the need to translate between different knowledge systems (i.e. in the complexities of interepistemic translation).

Chapter 1 begins in the same place as many of the current discussions of translationality and epistemic translation (see Bennett, 2023; Blumczynski, 2023; Robinson, 2017): the *translation studii* of the Middle Ages. Joëlle Ducos argues that this act of translating knowledge from antiquity did not consist merely of a linguistic transfer from one language to another but encompassed reflections on the text and its different versions, and often involved vulgarization through lexical choices. She draws attention to the geographical, temporal and intellectual aspects of the translation process, and to the diversity of translation strategies employed. Ducros proposes that translation is itself a driving force for scientific reflection – not merely a tool for communication, but an integral part of the development of scientific discourse, and, as such, of science itself. Focusing particularly on the role of terminology, she highlights the epistemological questions that arise in its translation and points out that a term can only truly function in a language if the readers understand the concept; hence, the reader is inevitably involved in the translator’s decision-making process.

The second chapter, authored by Philippe Selosse, is reviewed in this issue by Pedro Navarro, and so will not be discussed here. As for Chapter 3, this considers translation and vulgarisation of astronomy in *Renaissance* France, citing the increased use of vernacular languages in 16th century Europe as a driving force for translations and vulgarisation. Violaine Giacomotto-Charra discusses the ways in which the translators of astronomy texts tailored their work for this new, naïve audience, both in the choice of the texts to be

translated, but also in their interventions within the texts. Indeed, she considers translation to be the ultimate form of vulgarisation – in keeping with some more recent statements on the subject made within the framework of (inter-)epistemic translation (e.g. Robinson, 2017; Bennett, 2024; Navarro, this volume).

In the fourth chapter, Jean-François Baillon considers two translations of Newton's *Optiks*: those of Pierre Coste (1720) and Jean-Paul Marat (1787), providing a detailed account of the social context of each of the translations and the translators' biographies.

Both Chapters 5 and 6 discuss translations of the Swedish biologist, Carl Linnaeus. Chapter Five, authored by the book's editor, Pascal Duris, discusses the difficulties of translating Linnaeus' new botanical nomenclature from Latin into French at the end of the 18th century. He discusses the different potential approaches to translation of the terminology (Gallicising the Latin terms, paraphrasing them, or both) and the problems associated with each one, which stem from the fact that Linnaeus created a new language in order to describe and name living things. Just as in Chapter 3, the ultimate question being explored here is how best to communicate a new way of thinking, which is being expressed in new language (based here on Latin), in a language and to people who have no prior knowledge of either – once again, a question of interepistemic translation. Thierry Hoquet, who discusses present-day translation of Linnaeus in Chapter Six, joins Philippe Selosse in warning against retroactively imposing a modern understanding of the world on readings of historical scientific texts. He emphasises the difficulties involved in understanding Linnaeus' text and the many potential traps a translator could fall into, particularly in terms of 'false friends'. We might conclude from this that the translator must first get to grips with the 'foreign' historical language of the original text in its episteme, in order to then be able to translate it into the modern episteme in an act of interepistemic translation.

Chapter 7, written by the historian Patrice Bret, is centred on Mme Picardet, a prolific translator of Enlightenment science into French. The chapter provides insights into this fascinating woman, who distinguished herself from *salonnières* of the period by her active involvement in the scientific conversations of the time, including through translation. It was not uncommon for her translations to include comments and observations penned by her, and Bret notes the importance of her contributions, citing her as an example of the social practice of science and the trend towards vulgarisation in this period.

Many of the chapters presented above contribute to our understanding of the translational processes involved in the transition from the Early Modern period to the current scientific mode of enquiry. The question of how to introduce epistemes to a new audience (as discussed in Chapters 3 and 5) is particularly relevant to those interested in the transmission of Western knowledge to indigenous peoples (and vice versa), and those interested in vulgarisation. Other contributions are pertinent to discussions of how specialist science is transformed into popular science or into forms more commonly seen within the humanities, such as literature and cinema. The eighth chapter of this book falls into this third category. In this chapter, Isabelle Poulin considers the multifaceted identity of Vladimir Nabokov, whose poetic and subjective writings on lepidopterozoology exclude him

from accepted scientific discourse; Nabokov's own presence within his texts sets him at odds with the norms of the scientific episteme. In contrast to the deliberate processes of vulgarisation discussed in the previous chapters, Nabokov, as presented by Poulin, seems to be unable or unwilling to conform to the norms of science and to adapt the literary form of his writings. Poulin does not speak of scientific and literary epistemes, but rather 'cultures', and states that Nabokov, "in choosing this 'literary' style, [...] seeks to remove the need for translation that arises from the chasm between these two cultures".

The terms 'epistemic translation' and 'translationality' are not mentioned explicitly in this work, which was published nearly ten years before Douglas Robinson's book on translationality (2017). However, as we have seen, the contributors address many themes relevant to these discussions, from vulgarisation to the confrontation between different epistemes, which makes this work of interest to scholars from both History of Science and Translation Studies. The heavy emphasis on case studies has the advantage of providing concrete examples of the concepts being discussed, but, as is true of all case studies, the observations are not necessarily generalisable. Additionally, contributions from other fields, such as chemistry, medicine and geology, would have provided welcome variety.

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REVIEW

TRANSLATING RENAISSANCE SCIENCE: PHILLIPE SELOSSE AND THE HISTORIAN'S DILEMMA

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'The Underlying Pattern of the Renaissance Botanical Genre *Pinax*', Selosse, P. in Skaffari, J. et al. (eds.) *Opening Windows on Texts and Discourses of the Past*. Amsterdam: John Benjamins, 2005, pp 161-178, €125, ISBN 9789027294586.

'Traduire les termes de couleur: la chromonymie en botanique à la Renaissance', Selosse, P. in Blampain, D., Thoiron P., and Van Campenhoudt M. (eds.) *Mots, Termes et Contextes: Actes des septièmes Journées scientifiques du réseau de chercheurs Lexicologie Terminologie Traduction*, Paris: Contemporary Publishing International, 2006, pp 619-629, Open Access,¹ ISBN 9782914610315.

'Traduire la nomenclature botanique néo-latine de la Renaissance: la linguistique au secours de l'histoire des sciences', Selosse, P. in Duris, P. (ed.) *Traduire la science: Hier et aujourd'hui*, Paris: Contemporary Publishing International, 2008, pp 25-43, Open Access,² ISBN 978-2-85892-352-6.

One of the possible situations interepistemic translation can illuminate is the process of translationality involved in the history of science. Science changes through time to reflect new discoveries or understandings regarding the world, and this raises problems similar to those seen with ancient versions of current language. No one expects a native speaker of any language to understand its early medieval form, making temporal translation a necessity. However, the situation with science is even more complex because it never depends on two languages alone, but on their *epistemic* backgrounds. When science is translated transtemporally, it is also translated interepistemically for the very paradigms (the ways the world is seen) change through time. Compare, for example, the geocentric and heliocentric worldviews.

The purpose of this review is to find commonalities between the concept of interepistemic translation that is the theme of this special issue and the ideas presented by the French linguist Phillipe Selosse. Selosse's ideas go back to his doctoral dissertation in Linguistics, *Un Aspect de l'Épistémè de la Renaissance: Méthode et "Nomenclature" dans l'Œuvre Botanique de Caspar Bauhin (1560-1624): Une Approche Linguistique*, defended in

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¹Available at: https://www.researchgate.net/profile/Marc-VanCampenhoudt/publication/236577177_Mots_termes_et_contextes/links/561d4e6208aef097132b20f9/Mots-termes-et-contextes.pdf (Accessed: 10 July 2024)

² Available at: <https://books.openedition.org/msha/8751> (Accessed: 25 Mars 2024)

2000. However, since the dissertation is not readily available, this work reviews three papers derived from it. His 2005 chapter 'The underlying pattern of the Renaissance botanical genre *Pinax*' presents his ideas regarding the *épistémè* of the Renaissance but does not explicitly mention its connection to translation; this only comes later in 'Traduire les termes de couleur: la chromonymie en botanique à la Renaissance' (2006) and 'Traduire la nomenclature botanique néo-latine de la Renaissance: la linguistique au secours de l'histoire des sciences' (2008).³

In his 2005 paper, Selosse expands the Foucaultian concept of *épistémè* to signify a period-specific configuration which determines the foundations (i.e. the 'hows' and 'whys') of knowledge production, not only in the scientific context but also in religious, philosophical, professional, and folk contexts as well. Thus, any scholar that wishes to properly understand the ideas of another period without anachronistically misrepresenting them would have to reconstruct the *épistémè* of that period, just as Selosse does with the scientific Renaissance genre *pinax* exemplified in the works of naturalists Gesner and later Bauhin.

In Selosse's next paper (2006), these ideas are related to (interlingual) translation, as he aims to show that

[...] to understand and translate terms that hide numerous difficulties (technical language, dead language, different *épistémè*), it is necessary to reconstitute them to their knowledge paradigm through multiple contexts (referential, taxonomic, cognitive, epistemic, and socio-historical) (Selosse, 2006, p. 619).⁴

Taking Renaissance botanical nomenclature as an example, Selosse identifies numerous problems for interlingual translation. First, there is the matter of translating a dead language, as most of the texts of the time are in Latin. This then becomes a 'double translation', as words are translated first from their vernaculars into Latin and then into current French. The translator also has to take account of diachronic distance (the way meanings change through time); conceptual heterogeneity (as certain categories, such as colours, are not perceived objectively but filtered socially and culturally); taxonomic heterogeneity (a term may refer to multiple species, while a single species may be denoted by multiple terms); and finally, absence of the referent (for example, in the case of plant colours, since all conserved specimens from the time will have lost their original colouration). Thus, it is not enough to merely translate these terms to identify a particular plant, since this, which Selosse (2006, p. 621) calls a "realist temptation from referentialism", can obscure the *épistémè* of the time.

³ Selosse gives another case study in his 2012 paper, which discusses the translation of category terms instead of descriptive ones. See: Selosse, P. "The Role of Carolus Clusius (1526-1609) as Translator in the Emergence of a Taxonomic Terminology in Botany," in *Translating Knowledge in the Early Modern Low Countries*, Cook, H. J. and Dupré, S. (eds.). Zurich: Lit, 2012, pp. 349-368.

⁴ All quotes were translated into English by the review author.

To these statements, Selosse (2008) adds two relativistic postulates: that science is a discourse that represents the world but that is not *itself* the world; and that language is the only way we have to access mental representations (themes, ideas, or concepts). The corollary of these statements is that linguistic forms cannot be ignored or supposed to be transparent in disciplines like History of Science, History of Ideas, or Philosophy.

To substantiate these claims, Selosse offers a case study on the translation of descriptive botanical terms, restricted to colour designations in a first study (Selosse, 2006) and expanded to other terms in a later one (Selosse, 2008). In his 2008 chapter, Selosse aims to “show how the ignorance about morphosyntax and the semantics of a language stage can hide essential particularities of a scientific paradigm,” presenting the following description by Bauhin in 1623 as an example: *Lacuta montana purpurocaerulea major*. This could be simply translated as ‘*Grande laitue de montagne bleu pourpre*’ [literally, large lettuce from the mountain purplish-blue]. However, Selosse tackles one term after another to show that such a direct translation destroys the Renaissance *épistémè* to which it originally belonged. First, to take ‘*Lactuca*’ as a *genus* in the translation presupposes a Linnean interpretation, though this taxonomy would only appear more than a century later (Selosse insists that the exact order of the words must be kept in the translation to convey the Renaissance taxonomic *épistémè*). As for ‘*montana*’, this is shown to be a false friend since it does not designate only mountain plants but also ones that grow on slopes and that occur in other regions but were observed by the naturalist on slopes or in mountains. ‘*Purpurocaerulea*’ does not refer to a shaded mixture of violet (which at the time was already referred to by terms like ‘*violaceus*’, ‘*violaceum*’, or ‘*violacea*’), but to two distinct colours which were not even adjacent in the colour spectrum (it is a coincidence that this case mentions blue and purple). What is more, the colours are not regressively named in Latin (i.e. to be understood as blue with shades of purple) but rather, the main colour is given first and then joins the second in a progressive compound adjective so that a more accurate translation would be ‘purple blue’. Lastly, ‘major’ should not be translated as ‘grande’ but as ‘plus grande’ to preserve the sequential and specific nature of the difference between the plants presented in Bauhin’s list.

Thus, from the perspective of translation method, it is essential to not rely on linguistic *a priori*s such as going for the most fluid or natural translation or having a pretension of equivalence between two morphosyntactic systems (the comparative in Latin equivalent of the positive in French): the objective is always to wonder about the choice of a language part or construction, however neutral it may seem, to obtain the most faithful translation which accentuates the particularities of the thought (Selosse, 2008).⁵

Thus, to keep the Renaissance *épistémè* in the current French language, the best translation would not be the natural sounding ‘*grande laitue de montagne bleu pourpre*’ but the more awkward ‘*Laitue des lieux pentus poupre bleue plus grande*’ [literally, lettuce

⁵ Selosse made another comment regarding translation method earlier. As translations cannot convey an entire *épistémè*, a critical and technical apparatus is needed.

of steep places purple blue bigger]. To use the former translation is to eliminate everything that constitutes the epistemic *milieu* that designated the original description.

Now, anyone familiar with Selosse's comments on translation will notice similarities with interepistemic translation. Although Selosse does not engage with Translation Studies theories in these texts, his example of an interlingual translation from Latin to French includes an interepistemic translation between the Renaissance epistemic system and the current one. According to Selosse, the translator is presented with the option of either translating in a way that sounds natural to the reader but loses the epistemic foundations of the source text or, alternatively, of using strange-sounding phrasing in order to preserve those foundations (essentially the same dilemma that translators of literary texts face between domestication or foreignization). As Selosse is concerned mostly with historians of science in his texts, he considers the first option to be wrong because historians need to be aware of the wider knowledge structures that sustain the text and not just the words. Selosse also connects deeply to a vertical diachronic view of translation. Anyone who performs an interlingual translation of a text from long ago needs to be aware of the *épistémè* of the time to avoid committing epistemicide. In other words, they need to be aware of the translationality inherent to science so as not to falsify an earlier paradigm in their translation.

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BOOK REVIEW

ETHNOGRAPHIES OF TRANSLATION

Rodrigo Lacerda*

CRIA - NOVA FCSH / IN2PAST

Translating Worlds: The Epistemological Space of Translation, Carlo Severi and William F. Hanks (eds.) Chicago: Hau Books, 2015, 324 pp, \$25.00, ISBN 978-0-9861325-1-3 (hardback).¹

Translation lies at the core of anthropology because it is fundamental to social life. This book, edited by Carlo Severi and William F. Hanks, does not focus on the metaphorical idea of anthropology as translation but on the proposal that translation is a social and cultural practice that anthropologists need to take seriously by producing ethnographies about it. This volume comprises an introduction by the editors and ten chapters by prominent anthropologists and one historian. Due to the epistemological and ethnographic complexity of each chapter, this review focuses on select chapters that highlight the main themes of the work as a whole.

The book demonstrates that translation is not solely the domain of specialists but is an essential part of everyday social life. This argument is explored through historical and contemporary colonial examples, examining the interactions between different worlds. Severi and Hanks define “worlds” as “oriented contexts for the apprehension of reality” (p. 10). Therefore, the editors propose that anthropology should study the “epistemological space of translation”, which encompasses the various stages and strategies needed to convey meaning across different worlds. This approach aligns with the objectives of the EPISTRAN project², which, as Karen Bennett (2024, p. 2) describes, “investigates the semiotic processes (verbal and nonverbal) involved in the transfer of information between different ‘epistemic systems’”.

The editors also stress that translation extends beyond language, encompassing the complex exchanges between worlds of cultural premises, values, and theories, and the use of nonlinguistic features such as gestures, rituals, images, or objects. The chapter by Emmanuel de Vienne and Carlos Fausto exemplifies this brilliantly. The authors examine the performative aspects associated with a short-lived case of prophetism led by a Kalapalo man in the Upper Xingu, Brazil, as an instance of ‘translating acts’ between Christian and Indigenous rituals and cosmologies, which originated new grand healing performances that quickly propagated in the region. Some of the rituals were registered by two Kuikuro

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¹ Also available at: <https://haubooks.org/wp-content/uploads/2020/11/Carlo-Severi-William-Hanks-eds-Translating-Worlds-The-Epistemological-Space-of-Translation.pdf>

² Available at: <https://www.epistran.org/>

filmmakers, allowing the anthropologists to meticulously study these innovations. The novel concept of 'translating acts' implies three ideas: translation encompasses actions whose form, context, and expressive force are more important than their referential meaning; the efficiency of the translation is determined by the cognitive abduction of the people involved, with actions being more relevant than words for assessing its success; translation is an iterative process of transcreation before eventually achieving a consensual stabilization. Rituals thus become experimental arenas for communication, especially when mediating radical alterity, which leads the authors to conclude that translation in these contexts is less about creating a lingua franca and more about generating new ritual forms.

At this juncture, translators might question how closely their work aligns with the translations performed by anthropologists and their interlocutors. Despite the editors' intention to foster dialogue between translation studies and anthropology, the chapters are predominantly written by anthropologists who reference a limited number of authors from translation studies. One challenge to this dialogue, as John Leavitt notes in his chapter, is that unlike commercial translators who must produce a usable text in the target language, anthropologists focus on contextualizing meaning, often creating "monsters", i.e., texts with neologisms and other strategies that distort and bend the reception language. Nevertheless, Leavitt acknowledges that the history of translation in both fields has oscillated between betraying the source and the target languages, as encapsulated in the adage *traduttore traditore*.

Bruce Mannheim's chapter builds on this conceptualization by trying to rescue W. V. O. Quine's proposal of 'radical translation', through a richer ethnographic, linguistic, and cognitive framework. Quine illustrated this idea with a parable about a linguist encountering an individual from an unfamiliar culture in a forest. With no bilingual dictionary or interpreter available, the interlocutor points to a passing rabbit and says '*gavagai*'. The linguist infers this to mean 'rabbit', but Quine cautioned that '*gavagai*' could also signify 'animal', 'rabbit flies', 'it runs', or even 'undetached rabbit parts', because the conceptualization of 'rabbit' as a bounded whole is, according to Quine, implicit to some languages but not necessarily universal. Hence, Quine demonstrates that multiple, equally valid translations can arise from the same set of observations and that translation is a complex interpretive process influenced by various factors, including the translator's own language and conceptual framework.

Mannheim updates Quine's concept of radical translation through Silverstein's idea of 'transduction', which he borrowed from physics. For example, a hydroelectric generator in a dam transforms one type of energy (the gravitational movement of water) into another kind of energy (electricity). Thus, in the broad realm of translation, transduction means that the contextual meaning is foregrounded (i.e., energy) and this is glossed in order to have the most appropriate effect in the target language. What must be carried through, even if in a different form, is the energy, i.e., the indexical meaningfulness of the source language. This is different from describing the meaning and context of use of a word as this would simply be an exercise of characterization. Mannheim illustrates this with Quechua, which

encompasses distinct registers. Most denotational translations from Quechua to Spanish are based on an elite register shaped lexically, morphologically, phonologically, and conceptually by Spanish influence. For instance, the Quechua verb *puriy* is often rendered in dictionaries as ‘to travel’, reflecting this elite register and world. In other registers that are more common in rural areas, the same word can signify very different things and is used in rather diverse contexts, which cannot be translated by using denotational substitution, as they were not influenced in the same way by Spanish. Consequently, each translation needs to be a transduction (or, less interestingly in most cases, a description) because it implies that the ethnographer has to make significant assertions about the indexical meaningfulness of the word in that specific context.

Despite the epistemological diversity evident in the book, Severi and Hanks are critical of two important strands in recent anthropology debates because they consider them antagonistic to their endeavour. First, they rebuke the universalism of cognitive sciences, which states that concepts exist prior and independently from language. If this were the case, they argue, then translation would be a mere interlingual substitution of pre-existing mental representations. Provocatively, Severi flips the argument in his individual chapter. Drawing on examples from the Amazon, he argues that ethnographies on translation not only demonstrate the invalidity of classical conceptions of how human cognition works but can actually help us understand the dynamics and structure of cognition and how it operates in different cultural contexts.

The editors also criticize the ontological turn in anthropology. It is not possible to explain here all the complexities of this rather diverse approach. Severi and Hanks mention in their introduction the two most famous authors in this area: Descola and Viveiros de Castro. The former is primarily recognized for his work in what some have termed ‘ontological cartography’, in which he identifies four distinct ontologies or worlds (animism, totemism, analogism, and naturalism) that represent different ways of establishing connections between humans and nonhumans. Viveiros de Castro is more well known for his proposal of Amerindian perspectivism, which can be considered a substrand of Descola’s animism. According to that ethnographic theory, like other animistic contexts, the cosmos for the Indigenous peoples of the Lowlands of South America is inhabited by humans and nonhumans with agency. However, in this case, both humans and certain nonhumans share the same human-like subjectivity, which they perceive through different referents. Typically, humans see humans as humans, animals as animals, and spirits (if seen) as spirits, while nonhumans like predatory animals and spirits view humans as prey animals, and prey animals see humans as either spirits or predators. Finally, both humans and nonhumans perceive themselves as humans with human attributes, such as feathers or fur being seen as human decorations and their food as human food (e.g., for jaguars, blood is manioc beer). Viveiros de Castro argues that the real danger in this context lies in making uncontrolled equivocal translations – attempting to equate different representations to a common referent, which happens when, for instance, a human mistakes blood for manioc beer, thus losing his human personhood and becoming a jaguar.

Therefore, the anthropologist must strive to develop controlled equivocations that make explicit that one representation can have two referents (the referent of manioc beer for humans is manioc beer but for the jaguar is blood).

Like many authors before them, Severi and Hanks criticize these proposals for the risk of creating reified, bounded, and incommensurate worlds, which would make translation impossible. They highlight the importance of the grey zones, particularly in relation to extensive ethnographic evidence on the history of colonialism in the Americas. This data shows the blending, grading, and switching between systems and the emergence of new types.

Intriguingly, one of the solutions to this conundrum presented by this book is the revival of the American philosophical school of pragmatism. This school of thought has also been used by the ontological turn in recent years to understand not the worlds (or ontologies), but the processes of worlding and of entanglement between worlds. American pragmatism asserts that ideas must be tested through experience and action, and that the value of a concept lies in its usefulness and ability to solve real-world problems. Therefore, a pragmatic turn in anthropology, as a necessary complement to the ontological turn, means recognizing the interaction between ontologies through pragmatic encounters that transcend ontological boundaries and are proven effective within specific spatial and temporal frameworks (as demonstrated for translation by de Vienne and Fausto in their chapter or by the idea of transduction invoked by Mannheim). Therefore, it seems that the main criticisms of Severi and Hanks lie in an oversimplification of the ontological turn and in their more emphatic focus on the grey areas of encounters between worlds.

Nevertheless, Anne-Christine Taylor's chapter is an important contribution to understand the relevance of the ontological turn in certain contexts. Based on her fieldwork with the Achuar in Peru, she analyses shamanic healing processes as a form of translation based on 'resonating juxtaposition'. During the healing process, the shamans communicate with the powerful Other, both in his kin spirits and the White's foreign languages, but their utterances are never direct quotations, except maybe when they are humming or singing. This means that shamans are "nontranslating translators" (p. 141). Taylor contends that this aligns with Amazonian shamanism as theorized by Viveiros de Castro through the lens of Amerindian perspectivism. Shamans are individuals capable of traveling between various perspectives or points of view (humans, spirits, animals, White people, etc.). However, their goal is never to strictly translate between different perspectives, which is dangerous because they could inadvertently lose their human personhood, but, as Viveiros de Castro suggests, to create controlled equivocations between different points of view. Hence, "resonating juxtaposition" is "a paradoxical mode of translation that aims at maintaining rather than suppressing the difference between the 'texts' involved" (p. 119).

In sum, this book illustrates that translation encompasses diverse forms, including instances of non-translation. In this respect, the volume could benefit from insights by authors such as Roy Wagner and Tim Ingold, who have also influenced the ontological turn

by highlighting the importance of creativity and invention in pragmatic encounters. After all, if translation is essential for social life, both are only possible, as the case studies in this publication demonstrate, through a constant iterative creative play inherent to human ingenuity. Therefore, this book is also an invitation for anthropologists to share more frequently the approaches employed in the 'epistemological space of translation', both by the individuals encountered during their fieldwork and those performed by the anthropologists themselves.

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BOOK REVIEW

TRANSLATION, COLONIALITY, AND EPISTEMICIDE

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Translation and Epistemicide. Racialization of Languages in the Americas, Joshua M. Price, Tucson: The University of Arizona Press, 2023, 189 pp, \$55, ISBN 978-0-8165-4782-1.

Inspiring: This is the word to describe *Translation and Epistemicide: Racialization of Languages in the Americas* by Joshua Price. The book takes the reader on a diachronic journey from colonial times to the present, exploring the connections between translation and epistemicide in the Americas. The book's cover, which features a detail from the work of Colombian artist Keko, aptly illustrates the ambiguities and the sense of intricacy radiating from the book's thematic axis that interweaves three main dimensions: colonialism/coloniality, translation, and epistemicide. Epistemicide refers to forms of power abuse characteristic of the coloniality of Eurocentered modernity, which "destroying, marginalizing, or banishing Indigenous, subaltern, and counterhegemonic knowledges" (2023, p. 4). Translation is a social practice that can reproduce but also challenge epistemicide, moving beyond the oppressor/oppressed dichotomy. The translation is indeed understood as "refraction" "not only of texts but of worldviews, epistemologies, and ontology (multiple ontologies), as well as the translation of sense of self or selfhood" (2023, p. 12), in its contextual, social, cultural, political, and material dimensions, while considering power asymmetries that can racialize languages, the epistemologies and ontologies they convey, and their speakers.

The book includes five chapters. In the first four, Price identifies and shows the mechanisms of 4 main strategies of the "translation-as-epistemicide" (2023, p. 1): the commensuration of languages and worldviews (chapter 1); epistemic marginalization (chapter 2); epistemic criminalization (chapter 3); and translation as intellectual extractivism (chapter 4). Above all, the final chapter (chapter 5) analyses examples of methodologies and strategies of decolonial translation. Indeed, with the premise that "not all translation is epistemicide, not all epistemicide involves translation, and not all epistemicide in Eurocentric or involved in racializing language" (2003, p. 13), the case studies, framed within their broad historical and political contexts, show how translation can function both as a tool of epistemicide and as a means to defiance power hierarchies in colonial and postcolonial contexts.

Chapter 1 explores how, during colonial times in the Americas, bilingual dictionaries that graphically combined colonial Spanish with indigenous languages served the purposes of

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evangelisation and colonisation of the colonised populations and territories. However, linguistic policies changed over time and were not homogeneous. The dictionaries constructed and naturalised asymmetries between indigenous languages and Spanish. Price emphasises the paradoxical aspect of the colonial project, noting that “the *vocabularios* glued two worldviews together hierarchically in a way that favored a Christian cosmology, an emerging Renaissance humanism, and an incipient universalist understanding of the human, even as many of the missionaries racialized language in such a way that they both recognized the humanity of Indigenous people and depicted them as intrinsically inferior” (2023, p. 26). Despite attempting to impose a forced commensuration implicit in the fixed and dichotomous structure of dictionaries, they also created neologisms, demonstrating the changing character of languages and cultures in contact. The translation project of dictionaries involved matching words and phrases in a binary system and implied a supposed equivalence of referents and domains. This epistemicidal translation system, on the one hand, suppressed differences and eliminated and denigrated concepts that did not correspond to the Christian worldview, as colonialism had imposed a system of representation that racialised Indigenous languages and their epistemologies as inferior. On the other hand, dictionaries attempted to mould Indigenous worldviews to fit into the Christian epistemological framework. The commensuration of worlds perpetuated through dictionary translation was based on the assumption that the categorisation between nature and culture in Western thought was universal.

These processes of epistemic injustice have dynamically regenerated throughout history through the marginalization of translators, interpreters, and theorists who have laid the groundwork for a theory and practice of decolonial translation, as exemplified by the Peruvian writer, translator, and anthropologist José María Arguedas. Price reads Arguedas’s essay *The Anguish of the Mestizo Between Quechua and Spanish* (1939) in counterpoint to Walter Benjamin’s *The Task of the Translator* (1923). Arguedas, on the periphery of modernity, “provides an embodied theory and he places Western rationality in tense conflict with other forms of thinking rather than transcendentally above other ways of thinking” (2023, p. 67). However, as valuable as Arguedas’s decolonial approach to translation theory may be, his contribution has been marginalised compared to Benjamin’s classic text.

If Chapter 2 provides an example of epistemic marginalisation, Chapter 3 demonstrates contemporary instances of how epistemicide operates through criminalising translations, translators, and interpreters. The racialisation of languages entails the racialisation of translations and the knowledge they convey, as well as the individuals who speak them, given that “translating is an embodied activity” (2023, p. 105). These processes are instrumental in imperialistic state control of counterdiscourses. In the logic of the war on terror, the United States justice system has controlled and prosecuted various Arab American and Latinx translators and interpreters for their translations, as the cases in the book, such as those of Tarek Mehanna, Mohamed Yousry, and Erik Camayd-Freixas. These

cases exemplify how imperialism can compel translators and interpreters “to be obedient to epistemicidal rather than liberatory logics” (2023, p. 21).

Chapter 4 investigates a potential case of epistemicide in the academic realm related to “intellectual imperialism” (2023, p. 107). Starting from the analysis of the growing academic field of ‘performance studies’ and the (non-)translation of the same notion of ‘performance’ in Latin America, the book examines possible risks of cultural homogenization and extractivism by the American and Anglophone intellectual hegemony, which may draw from the cultural and artistic practices of Latin America. These theoretical and methodological attitudes can reinforce the cultural and academic domination of the Global North and do not support “decolonizing imperial knowledge or open the way to a thorough reconstitution of the academic departments that produce that kind of knowledge” (2023, p. 136).

Chapter 5 concludes the book with a constructive outlook, delving into techniques and strategies of decolonial translation. The chapter highlights two examples of how subaltern intellectuals and activists can question hegemonic systems that reproduce themselves “not just between groups but also among members of subaltern, racialized groups” (2023, p. 138). Price illustrates the ‘stereoscopic reading’ as a decolonial methodology, which, as Marilyn Gaddis Rose explains, involves “a translation [being] read in ‘stereo’ with its source and it is read as an interpretation of its source” (2023, p. 139). Price selects contemporary Latinx queer theorists Rick Santos and Ernesto Martínez as paradigmatic examples of ‘stereoscopic reading’. Their translation projects bring to life not just an interpretation of differences but also produce a “transformative effect” (2023, p. 139) as political practices. Indeed, as translators and cultural actors, they “live in translation” (2023, p. 149), interpreting and reframing “the dangerous intersections of cultures in conflict at points of colonial predation and the policing of subaltern and racialized masculinity” (2023, p. 22).

The book concludes by reflecting on the ethical role of translation, both in its theoretical and practical dimensions, to facilitate the emergence of a plurality of views of worlds, with all their ambiguities and frictions. For this reason, as the author suggests, it is crucial to continue delving into the connections between translation, epistemologies, and ontologies in contexts of power asymmetries. With a selection of bold and original examples, the book constitutes a valuable and necessary contribution to translation studies and cultural studies, illuminating the mechanisms that link epistemicide and translation. From a transhistorical perspective, it consistently highlights forms of epistemic and decolonial defiance.

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