

# 16 The Experience of the Translator

## Richard Eden and *A Treatyse of the Newe India* (1553)

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Experience illuminates the margins of what is presently known. Francis Bacon's "merchants of light" in *New Atlantis* (1626) were trading a similar commodity, extending the boundaries of the visible and enabling new observations. The light of experience unveils new forms for the mind, from where they reach the pages of manuscripts and prints in the shape of signs. A common metaphor describes the process by which those signs are translated into other languages as a prism through which light is refracted and made more visible by being separated into a rainbow spectrum. In epistemic translation,<sup>1</sup> experience is refracted into components, and then reordered and recodified in pursuit of new epistemic and cultural objectives.

Articulations of experience, central to early modern scientific arguments and narratives, had complex linguistic tasks to fulfill. The words into which experience was put were required to convey the evidence of the senses, and at the same time to enable verification and reenactment of that evidence in other settings, for which it had to be capable of translation across different linguistic, cultural, and epistemic realms. Premodern scientists often scrutinized the verbalizations of experience hermeneutically and semantically, and their statements about the capacity of human languages to capture and convey experiences often rang with skepticism.<sup>2</sup>

Early modern naturalists viewed experience as a mediator between sense perception and concepts.<sup>3</sup> Influential Aristotelian formulations generally located experience on a route leading from isolated perceptions to images, memories, and ultimately universal judgments.<sup>4</sup> Early modern natural philosophers, although also aiming to gain universal knowledge, prioritized materiality, as given in the evidence of the senses, and emphasized the importance of meticulous induction from specific cases.<sup>5</sup> Consequently, they queried the role of words and natural language in understanding "things themselves."

In Francis Bacon's legacy, we see such critical reflection on the experience of things and the relationship between things and words, *res et verba*.<sup>6</sup> Bacon's *Novum Organum* (1620) likens experience to light, which manifests "the subtilty of things."<sup>7</sup> Experiences, Bacon argues, comprise

immediate perceptions of the senses, which are generally reliable. However, “the human mind resembles those uneven mirrors which impart their own properties to different objects,” jumbling the rays of experience and distorting the resulting notions.<sup>8</sup> True knowledge can only be achieved by organizing individual experiences into *experientia literata*—learned experience, which follows a sequence reflecting the order of nature and thereby yields true knowledge of “things themselves.”<sup>9</sup> Bacon’s thinking inspired the “plain language” reform of the Royal Society,<sup>10</sup> which saw the relationship between *res et verba* as the key to descriptive classifications of natural forms and qualities that could lead to universal knowledge. The matter was further probed by the universal language movement in the period, and also found applications in writings on the arts.<sup>11</sup>

Various ideas and schemes concerning the complex relationships between words and things were thus widespread in early modern intellectual, scientific, and artisanal debates. Some actors, however, participated in these debates not as intellectuals or artisans, but as practitioners immersed in the business of communicating experience by means of ordinary language. Translators had to unpick the relations between words and things within different tongues and media for each translation, in many cases applying their own personal experience in order to discern that “subtilty of things.” How did translators reflect on their experience, as translating subjects, of matching words and things? How did their own experiences relate to those conveyed in translation? What affected translators’ decisions when they repurposed their own and communicated experiences in the twists of epistemic translation?

My chapter approaches these questions through the case of Richard Eden (1520–1576) and his first publication, which translated excerpts from *Cosmographia universalis* (1550) by Sebastian Münster (1489–1552) as *A Treatyse of the Newe India* (1553; hereafter *The Newe India*). This slim volume has attracted less historiographical attention than Eden’s subsequent, more substantial *The Decades of the Newe Worlde or West India* (1555).<sup>12</sup> Yet *The Newe India* has been recognized as the first scientific geographical work about the “New World” in English,<sup>13</sup> and it deserves more scholarship, given that it involved some of the earliest practices of scientific translation into English. In the following, I examine first Richard Eden’s experience of learning, then his methodological reflections on the experience of the translator. Finally, I look at the relationship between his experience and the experiences he conveyed in epistemic translations in which the eyewitness reports of the first European navigators in the New World were harnessed to the task of making geographical exploration a public enterprise.

### The Translator’s Learning Experience

In mid-sixteenth-century England, translators were recruited from various backgrounds. As translation offered only a precarious livelihood, they

often worked as secretaries or with printers as well.<sup>14</sup> Richard Eden was known to his contemporaries as a translator, secretary, and alchemist.<sup>15</sup> From his own curriculum vitae, we learn that he was born into a prosperous merchant family with a tradition of university education and public service.<sup>16</sup> Eden earned his Master's degree at Cambridge, where he seems to have been an undistinguished student,<sup>17</sup> then entered employment as an exchequer clerk.<sup>18</sup> His Cambridge advisor Thomas Smith excelled in making herbal remedies, which apparently secured Eden's brief appointment as a distiller of waters for the royal household. But his heart (and his family's wishes) being in gold, he applied for a position at the Mint. That venture ended in a scandal in which he lost the manuscript of his English translation of Vanuccio Biringuccio's *De la pyrotechnia* (1540), one of the first publications on metallurgy.<sup>19</sup>

Despite this setback, Eden's fascination with metals returned him to translation. In 1552, Sir William Cecil employed him to translate selected chapters from Sebastian Münster's *Cosmographia* (1550), a work describing what were believed to be strategic locations in the New World where the English crown might benefit from rich deposits of precious metals.<sup>20</sup> The selection included excerpts from Book V, containing summaries of Columbus's letters and eyewitness reports on voyages by Magellan and Vespucci.<sup>21</sup> Münster had rendered the experiences of navigators during their exploration of new "lands and islands," incidentally a distinction typical of the progression from "islands" to "continents" in contemporary norms of geographical description.<sup>22</sup> Eden's translation, as *The Newe India*, set up his reputation as a translator, and he subsequently published several pioneering translations and compilations.<sup>23</sup>

In his translator's preface to *The Newe India*, we find Eden's earliest reflections on his own experience of learning to become a knowledgeable translator. Although his intentions are probably dictated by Cecil's patronage, Eden gives a different justification for his decision to translate: in an unfavorable review of an earlier, less ambitious booklet, *Of the Newe Landes* (1511), he contrasts its naive narratives with his own superior geographical competence.<sup>24</sup>

The preface goes into some detail as regards the source of this expertise. Most importantly, Eden presents a distinct position on the translator's experience as part of his broader reflections on how different ways of using experience can validate knowledge claims. The preface summons all epistemic authorities at once, catering to university scholasticism, humanist natural history, and artisanal experimental philosophy.<sup>25</sup> Arguing that the places most apt to bring forth gold, spices, and precious stones—and therefore most lucrative to appropriate—are the south and southeast parts of the world, he offers as evidence that "olde and newe Histories, dayly experience, and the principles of natural Philosophie" all say as much, and "our Sauiour Christ approueth the same."<sup>26</sup> Citations from Albert the Great (1200–1280) and Georgius Agricola (1494–1555)

help support this ambitious claim, which is further underlined by the marginal note “Experience, the teacher of al sciences.”<sup>27</sup>

Clearly, Eden’s view of learning through experience was indebted to multiple sources. In the same preface, Eden considers “the experience to be most certayn which is joyned with reason or speculation.” He derives this dictum from a comparison with medicine and notes how “the Phisicians determin theyr science,” where “neyther practyse is safe without speculation, nor speculation without practice.”<sup>28</sup> In fact, it was a widespread outlook characteristic of many learned practitioners. For example, one of Eden’s preferred authorities, Georgius Agricola, in the preface to his *De re metallica* (1556) a few years later, gave an even more detailed recipe in which experience and reason are not epistemic polarities but parts of a continuum: “I have omitted all those things which I have not myself seen, or have not read or heard of from persons upon whom I can rely. That which I have neither seen, nor carefully considered after reading or hearing of, I have not written about.”<sup>29</sup> Every *scientia* worth communicating is derived from experiences on which the practitioner can rely in different cognitive ways according to their different epistemic statuses. Agricola places these epistemic statuses on a spectrum that ranges from his own immediate experiences to experiences mediated through spoken or written sources. Along it, experiences can move from one epistemic status to another through the relationship of intellectual trust and the practitioner’s reasoning when “carefully considering” those experiences.

Despite his rich citation practice, Eden was searching for his own programmatic rules of how experiences acquired in various ways could amount to valid expertise. In his preface, he describes learning as drawing on a range of sources: one’s own experience, the experience of being taught by experts, and the experiences mediated through written texts. Together, these accumulate to form occupational identity:

And wheras I have here spoken of knowledge joyned with experience, I meane by knowledge that which we commonly call learning, whether it be gotten out of bokes (which are the writings of wyse and expert men) or otherwyse by conference & educacion with such as are lerned: meaning nought els by learning, but that gathering of many mens wittes into one mans head, & the experience of many yeres, and many mens lyues, to the lyfe of one, whom we call a learned wyse, and expert man.<sup>30</sup>

Eden reflects on the means by which individual experiences are “gathered” from diverse sources, and how they may become validated expertise: progressively, through gradual learning. Learners can also amass the experiences of many thinkers over several generations. Eden’s guidelines for gaining knowledge recommend combining new experiences, obtained

from various sources, with existing knowledge based on one's own experience. This anticipates the Baconian vision, in which collecting individual experiences in a reflexive and ordered manner paves the way to true knowledge—far from merely heaping up experiences, learning must enable an *experientia literata* that is ordered and classified. Bacon's *Instauratio magna* suggested practices for ordering experiences in such a way as to approach the knowledge of “things themselves.” As I will show, Eden's reflections on experience were moving in a similar direction.

### The Translator's “Long Experience”

In the decade after *The Neue India*, Eden's translational career flourished. In 1561, his translation of Martín Cortés de Albarac's *Arte de navegar* as *The Arte of Navigation* was published as the first English-language manual on navigation.<sup>31</sup> In this period, his earlier reflections on learning and experience give way to a more specific vision of the experience of the translator. We are fortunate to have his testimony on that topic in a 1562 letter to his patron, Sir William Cecil:<sup>32</sup>

Exercise also maketh suche woordes familier, which at the first were difficulte to be understode; ... And I have learned by experience that the maryners use manye Englysse woordes, which were as unknowen unto me as the Chaldean toonge before I was conversant with them. It maye therefore suffice that the woordes and termes of artes and sciences be knowen to the professours therof, as partely by experience and partely by the helpe of dictionaries describing them per proprium genus et differentiam, as the logitians teache, and as Georgius Agricola useth to do in the Germayne toonge, which, as well in that parte of philosophic as in all other, was barbarous and indigent before it was by longe experience browght to perfection.<sup>33</sup>

Apparently, Eden was building up his competence in a special field through contacts with practitioners. This was an accepted method among translators at the time; as Juan Luis Vives advised in *Practice in Writing* (1531), “the works of Aristotle will be badly translated by a man who is not a philosopher and those of Galen by a man who is not a doctor.”<sup>34</sup> Talking to merchants and mariners, Eden collected the colloquialisms of the navigational arts—words and phrases used in ordinary conversations, where they helped articulate everyday occupational experiences. He then collated them with nomenclatures he acquired from dictionaries and other books during the process of translating the navigation manual. Eden's own experience as a translator thus brought together learning “whether it be gotten out of bokes ... or otherwyse by conference & educacion with such as are lerned.” His description of the translator's experience gives concrete form to his earlier discussion on experience and learning as the

“gathering of many mens wittes into one mans head, & the experience of many yerres.”

Moving to the work of the “professors of arts and sciences,” not holders of academic chairs but experts in arts, Eden notes that their business involves “knowing the words and terms,” which are learned partly by experience and partly through dictionaries. The expert uses these sources actively, winnowing out the terms of art *per proprium genus et differentiam*—that is, through logical semantics. Eden favorably mentions Georgius Agricola’s work “in the Germayne toonge,” and indeed Agricola’s *De re metallica*, then recently printed, speaks of just this topic in relation to mining:

Since the art of mining does not lend itself to elegant language, ... the things dealt with in this art of metals sometimes lack names, either because they are new, or because, even if they are old, the record of the names by which they were formerly known has been lost. For this reason, I have been forced by a necessity, for which I must be pardoned, to describe some of them by a number of words combined, and to distinguish others by new names. ... and if anyone does not approve of these [new or old] names, let him either find more appropriate ones for these things, or discover the words used in the writings of the Ancients.<sup>35</sup>

Agricola sees the difficulty of “lacking names,” both for translating ancient texts into the vernacular and for articulating his own experiences. He responds by applying logical semantics to create neologisms—as Vives advised, “the translator may add or subtract. He may put two words for one or one for two.”<sup>36</sup> Eden acknowledges a similar problem in his letter to Cecil, discreetly contesting his employer’s doubts about the translatability of *Historia naturalis* by Pliny the Elder from Latin into English:<sup>37</sup>

Agen, it is not unknowen unto your honour that ons all toonges were barbarous and needie, before the knowlege of things browght in plentie of woordes and names; Exercise also maketh suche woordes familier, which at the first were difficulte to be understode; ... although the Latine toonge be accompted ryche, and the Englysshe indigent and barbarous, as it hathe byn in tyme past mucche more then it nowe is, before it was enriched and amplyfied by sundry bookes in maner of all artes translated owt of Latine and other toonges into Englysshe.<sup>38</sup>

The English language lacks key terms, but Eden is willing to perform the same duty for his native tongue as he believes Agricola performed for German. Translating scientific writings from Latin into English, Eden argues, enriches and expands the vernacular. This malleability of

the vernaculars has another consequence: the translatability of a Latin treatise changes along with the changing condition of the English language. Eden skillfully presents himself and Agricola, an established and esteemed expert, as colleagues pursuing the same work of accumulating learned experiences by ordering them *per proprium genus et differentiam*.

Ultimately, improving the condition of English “brings in plenty of words and names” for communicating new experiences, which enhances knowledge of things. The role of translation in building up valid expertise is similarly asserted in Eden’s *The Arte of Navigation* (1561): “Now therefore thys woорke of the Art of Nauigation, being publyshed in our vulger tongue, you may be assured to haue more store of skilfull Pilots ... such as by their honest behaiour and conditions, ioyned with art and experience, may do you honest and true seruice.”<sup>39</sup> Eden consistently notes the role of translation in amplifying expertise: the “long experience” of experts, ordered by translators and conveyed through the words and terms of art, helps to articulate the knowledge of things and bring expertise to perfection.

The historical context of Eden’s views shows that he elaborated on the cutting-edge translatorial thinking of his time. Étienne Dolet, summarizing the rules of the art from the previous century in his influential *The Way to Translate Well From One Language into Another* (1540), insisted that translators must “not be servile to the point of rendering word for word” or “adopting words too close to Latin,” but should choose idioms in common use.<sup>40</sup> Eden’s ideas on enrichment through translation can also be related to French discussions epitomized by Joachim du Bellay’s *The Defense and Illustration of the French Language* (1549), which explained how to expand the vernacular using translations from classics, thus enriching the language through “the ingenuity and industry of men.”<sup>41</sup>

In his native linguistic environment, Eden was evidently influenced by the contemporary program of humanist education exemplified by Thomas Elyot’s *The Knowledge which Maketh a Wise Man* (1533).<sup>42</sup> Elyot precedes Eden in declaring his intention “to augment our Englyshe tongue, whereby men shoulde all well expresse more abundantly the thyng that they conceiued in their hartis ..., hauyng wordes apte for the purpose, as also interprete out of greke, latine, or any other tonge into Englyshe.”<sup>43</sup> This agenda was also promoted by Elyot’s *The Dictionary of Syr Thomas Eliot Knight* (1538), which boasted of vastly surpassing its counterparts in “proper termes belongyng to lawe and phisike.”<sup>44</sup> Eden may even have used Elyot’s dictionary for translating some terms. For example, his translation of *temperies* (as an air quality) by “temperatenes” follows the dictionary precisely.<sup>45</sup>

The gap between the novelty of things and the poverty of language, necessitating many new words, was already noted in Antiquity.<sup>46</sup> Like numerous other lexicographical ideas of the Renaissance, Elyot’s bilingual lexicography and Eden’s translational methods, based on a dynamic



view of language, were shaped by humanist responses to Cicero's Stoic linguistics with its emphasis on speech acts.<sup>47</sup> Cicero's *De oratore* describes the practices of "rendering" into Latin what has been read in Greek and "coining by analogy certain words such as would be new to our people."<sup>48</sup> And his *De finibus bonorum et malorum* analyzed the lexical operations appropriate for coining new terms in translation, pointing out that "words which the practice of past generations permits to employ as Latin ... we may consider as being our own, ... [since] the Greek terms have been familiarized by use."<sup>49</sup> Erasmus's critique of slavishly imitating Ciceronian models, together with calls in England and France to systematize and standardize the natural language, advanced such practices of vernacular imitation of the classics, in which translators were likened to orators. This allowed the rules of rhetoric to be used effectively for codifying novel experiences in that "disorderly heroic age" for translation.<sup>50</sup>

Eden's notion of scientific translation draws on humanist linguistics, but complements it with his own understanding of the relationship between language and experience, which emphasizes the "knowledge of things." His assessment of translation as a means of perfecting *scientiae* can be considered in light of critiques of the linguistic processing of experience in early modern natural philosophy.<sup>51</sup> Returning once more to Bacon's *Novum Organum*, published long after Eden's death, let us recall that Bacon distinguishes between disordered experience, *experientia vaga et incondite*, and experience made in good order, *experientia ordinata et bene condita* or *experientia literata*—the latter implying a gradual advancement of learning through a regulated procedure.<sup>52</sup> Such ordering of experiences meant setting up descriptive scientific categories, the words and terms of the art, according to "the true divisions of nature."<sup>53</sup> As we have seen, Richard Eden's reflections as a translator on the role of "long experience" in building expertise thus prefigure the ways that later practitioners handled the relationships between *res et verba*.<sup>54</sup>

### The Translator's Experience in the *longue durée*

Sebastian Münster first published his magnum opus *Cosmographia* in German in 1544, as the earliest German-language description of the world.<sup>55</sup> The processing of experience was at the core of his project—the volume collated his own translations from classical treatises with vernacular eyewitness reports on European lands and beyond, such as Muscovy and India, which he collected on his own travels and through a voluminous correspondence. In 1550, Münster rewrote his German text in an expanded Latin version, from which it was translated into several vernaculars including French, Bohemian, Italian, and English.<sup>56</sup>

*Cosmographia* became a successful specimen of the genre of cosmography, which brought together disparate textual materials on a theme, furnished them with illustrations, and added citations from authorities, resulting in a narrative version of the cabinet of curiosities. Facilitated by



the characteristic “aesthetics of *varietas*,”<sup>57</sup> cosmographies spread across Europe from Portugal to Muscovy.<sup>58</sup> Münster’s volume was no exception: it circulated widely in various editions, which by the mid-seventeenth century had made it a standard work among anthropological reports. The plain descriptive style of this illustrated folio conveyed the experience of an observant traveler, which accorded well with the tasks set by Eden’s patrons for a publication about the New World.

Eden’s translation, *The Newe India*, was conceived in 1552, when Sir William Cecil needed assistance in publicizing his planned voyage to China to explore the northeast passage from Europe to Asia through the Arctic.<sup>59</sup> This task was set by his own benefactor, the Duke of Northumberland, who shortly before his ruinous attempt to crown Lady Jane Grey set out to overcome England’s financial difficulties by acquiring Spanish colonial mines. The Duke needed to instruct young mariners with new navigational textbooks, for which he consulted with experienced mathematicians such as Thomas Diggs and Robert Recorde, but he also wished to advertise his enterprises and attract prospective seafarers.<sup>60</sup> In 1553, this remit led Cecil to employ Eden to translate selected chapters from Münster’s *Cosmographia*.

Eden aimed to do more than just reproduce his source, Book V of the *Cosmographia*’s 1550 Latin edition. He referred to his work as a treatise with its own theme: “A treatyse of the newe India with other new founde landes and islandes, aswell eastwarde as westwarde, as they are knowen and found in these oure dayes, after the description of Sebastian Munster in his boke of universall cosmographie.”<sup>61</sup> Pronouncements of a certain autonomy from the original were not exceptional in translations at the time, but most claimed the opposite—to be as faithful a rendering of the original as the translator’s competence permitted.<sup>62</sup> Moreover, advertising a new publication as a faithful translation of some presumably already successful original was a common marketing strategy.<sup>63</sup> Eden’s mark of self-sufficiency will have pleased his patrons, and the volume’s independent structure indeed privileged accounts of India, China, the Spice Islands, and the voyages of Columbus and Vespucci to the West Indies. In fact, the final chapter originates not from Münster at all, but from Aeneas Silvius (Pope Pius II, 1404–1464), whose own *Cosmographia* had stirred Columbus’s exploratory zeal.<sup>64</sup> Eden may also have wished to imply that his communications on the New World were more complete—it seems that he collated Münster’s Latin text with its earlier German version.<sup>65</sup> Lastly, Eden enlivens the text with his own marginal comments on finding gold, ivory, diamonds, and other valuables, which readjust the readers’ economy of attention and whet their appetite for exotic treasures.

In line with his selection and collation, Eden’s translation methods were flexible enough to repurpose the experiences of celebrated navigators, as recounted in Münster’s narrative, to intrigue English mariners. For instance, a passage describing the Canary Islands, part of the crucial chapter “Of the newe India and Ilandes in the West Ocean sea, how,

when, and by whom they were found,” depicts Columbus’s detour to the islands in 1492—they were the last European port of call before the open seas and at the center of the trade winds. Eden only tells readers that the islands “were in time past called Fortunate, for the excellent temperatenes of the ayre, and greate fruytefulnes.”<sup>66</sup> Münster’s 1550 Latin text gave more, and potentially less serene, detail: “They [the islands] were then truthfully called fortunate, due to the wonderful mild and favorable air and winds, and there dwelled those wild races, in whom there was no religion, and no modesty, since they walked about totally naked.”<sup>67</sup>

In fact, Münster’s account of the Canaries was itself not “original,” in the sense that he rendered it closely from the 1507 Italian compilation of travel accounts *Paesi novamente ritrovati*, attributed to Fracanzano da Montalboddo and translated into Latin in 1508 as *Novus orbis regionum ac insularum veteribus incognitarum*.<sup>68</sup> As a result, Münster’s volume reflected the experiences of the first European navigators; by Eden’s time, the islands’ demographics had changed drastically due to Spanish colonization, which left only a few indigenous people surviving as farmers and sailors.<sup>69</sup> Chillingly, Eden’s version is silent on the very existence of the indigenous people on the islands. Instead, earlier on the same page he adds a marginal note encouraging the conquerors: “Great enterprises haue euer ben counted phantasticall.”<sup>70</sup>

As can be seen from this brief account, *The Neue India* did not abide by the more recent textual taxonomies that discriminate between translations, compilations, and commentaries, any more than did other translations of his day. The procedures of translational text processing, where we recognize humanist techniques,<sup>71</sup> were far less strictly delineated than that. The experience of the translator also embraced the range of skills that in later times would be redistributed in the production of a book and ascribed to editorial competence.

Apart from the expertise involved in preparing the text for publication, the translator’s experience could sustain other permutations in the translation’s later fortunes. In Tudor England, politically sensitive materials were sometimes flexibly endowed with different meanings by translators and used as leverage by their patrons. Source text and the translation might even pursue opposite argumentative goals if addressing opposing audiences. In the words of Erasmus, truly persuasive descriptions must be so reinforced with convincing details that they can fight on their own to win the case.<sup>72</sup> If the source and the translation seek to win opposing cases, their convincing details may begin to fight against each other. In the historical analysis of colonialism, situations like these have called for “thick description.”<sup>73</sup>

The experiences conveyed in *The Neue India*, together with Eden’s own experience, took a peculiar political turn. In 1553, the treatise entered a milieu that suddenly became hazardous due to the misfortune of the translation’s dedicatee, the Duke of Northumberland, and

Mary Tudor's marriage to Philip of Spain. Eden's publishing intentions became subject to sharper questioning—was he urging England to compete with Spain for its territories in the New World, or rather praising Spanish conquests?<sup>74</sup> Eden's navigational exemplars focused on voyages east, west, and southwest of Spain,<sup>75</sup> which may have gained him the favor of "certain Spanish nobles" and later a position at Philip's English treasury.<sup>76</sup>

In spite of or because of its interventions, *The Neue India* secured a place in the history of geography. It is widely regarded as the first precursor to Richard Hakluyt's famous collection *The Principall Navigations, Voiages, Traffiques and Discoveries of the English Nation* (1589–1600),<sup>77</sup> underlining the findings of statistical book history that works written in English were often preceded by similar writings translated into English.<sup>78</sup> *The Neue India* became one of the first experience-based scientific geographical publications in England, and has been described as an early attempt to make maritime exploration into a public enterprise.<sup>79</sup>

### Translations as Communicative Actions

Premodern scientific translations often repurposed the experiences conveyed in their source texts, which were themselves part of a variety of intellectual and political entanglements, especially during periods of prolific scientific development.<sup>80</sup> If these translational encounters call for "thick description," the best means of tackling them may be the methods of detailed contextualization in "thick translation," though this would exceed the scope of the present chapter.<sup>81</sup> Another way to investigate the mélange of descriptors is to approach historical translations primarily as different types of communicative actions,<sup>82</sup> in order to highlight various intentionalities involved in translations and establish what translators "were *doing* in writing them."<sup>83</sup> Viewing scientific translations in this way reveals the heuristic and public objectives that affected what was learned in translation and how new knowledge was made.<sup>84</sup>

Often, what early modern scientific translators were "doing" was to promote particular practices in the target culture. In this sense, the translation was determined not only by its past in the source domain but also by its own desired future in the target domain. François Jacob called science "the machine for making the future," and scientific translation helped make the future of science by suggesting desiderata for its development.<sup>85</sup> This anticipatory temporality of translation offers us a dynamic understanding of translation, in which the invisibility and the agency of the translator do not collide.<sup>86</sup> Premodern scientific translation sought to reconcile in itself the values of lucidity and innovation, as a kind of lens—while staying transparent itself, it aimed to bring closer science's vision of its own future.

In the methodologies that Richard Eden expounds, the experience of the translator involved a range of communicative actions processing

individual experiences. In this epistemic translation, the words and terms of art were ordered *per proprium genus et differentiam*, fine-tuning the translator's repertoire of language and consequently other types of expertise in the target domain. Eden's deployment of his own and others' accumulated experience helped him to justify his own undertaking and the dynamic translatability of his sources. Acknowledging the need to produce a readable translation, and alert to issues of incommensurability between the source and target languages, he regarded translation as a process eminently capable of transforming the *scientiae*. I hope my comments on the experience of the translator have shown the role that their accumulating, ordering, and historicizing scientific experience played in the advancement of learning. This essay began by introducing an apparently undistinguished young man who published a small book that became a seminal geographical treatise in English about the New World. And I finish my narrative with the fact that the essay is published internationally in the English language.

## Notes

- 1 As defined in the Introduction to this volume.
- 2 Discussed by, among others, Lewis, *Language, Mind, and Nature*; Formigari, *Language and Experience*; Howell, "Res et verba."
- 3 See Formigari, *Language and Experience*, 19–41.
- 4 See Aristotle on *empeiria* vs. *technē* in *Metaph.* I. 981a; also *Post. Anal.* II.19, 100a4.
- 5 Aristotelian and Baconian methods are concisely compared in Cushing, *Philosophical Concepts*, 15–28; Larsen, "Aristotelianism."
- 6 See Formigari, *Language and Experience*, 1–14.
- 7 Bacon, *Novum Organum*, I. 74, ed. Devey, 51.
- 8 *Ibid.*, I. 41, 20–21; I. 14–15.
- 9 *Ibid.*, I. 82, 60 and I. 84, 62. See Barnaby, "'Things Themselves.'"
- 10 Sprat, *History of the Royal Society*, 339. See also Hüllen, *Their manner of discourse*.
- 11 See, among others, Slaughter, *Universal Languages*; Dolezal, *Forgotten Lexicographers*.
- 12 *The Decades of the Newe Worlde or West India* (1555) translated parts of Peter Martyr's *De orbe novo decades* (1511) and Gonzalo Oviedo's *De la natural hystoria de las Indias* (1526).
- 13 See Penrose, *Travel and Discovery*, 314; Arber, *First Three English Books*.
- 14 Bennett, *English Books*, 159.
- 15 John Bale in *Scriptorium Illustrium Catalogus* (1557) and Lawrence Humphrey in *Interpretatio Linguarum* (1559) mentioned "Johannes Eden, Cosmographus et Alchumista." On Eden's attempts to reconcile texts and experiences in alchemical pursuits, see Rampling, *Experimental Fire*.
- 16 See Eden's petition submitted to Queen Elizabeth. Arber, *First Three English Books*, xlv–xlvi.
- 17 Searle and Clark, *Grace Book Gamma*, 333–34.
- 18 Gwyn, "Richard Eden," 14–15.

- 19 The disaster is detailed by Kitching, “Alchemy.”
- 20 Hadfield, “Peter Martyr”; Schepper, “Foreign Books,” 122.
- 21 See Cole, “Renaissance Humanist Scholars,” 238; Bauer, “Crucible.”
- 22 For more on Münster’s account of the New World, see Davies, “America and Amerindians.”
- 23 Eden produced two more translations of excerpts from Münster’s *Cosmographia*: in 1555 he added parts of the sections on Muscovy and China to his famous *Decades*, and in 1574 made another compilation from Münster titled *A Briefe Collection and Compendious Extract of Straunge and Memorable Things*. In 1561 he translated Martín Cortés de Albarcar’s *Arte de navegar* and Martín Cortes’s *Breve Compendio de la sphaera y de la arte de navegar* (1556), in the process of which he is thought to have helped to devise the volvelle, an astronomical slide chart. Eden is also remembered for an abridged translation of Vesalius’s *De humani corporis fabrica* (1559). In 1574, he translated Dr. John Taisnier’s *De natura magnetis* (1562) with sections on the shape of hulls and tidal flows.
- 24 Eden, *A Treatyse of the Neue India* (hereafter *Treatyse*), [4]. The booklet was attributed by printer Jan van Doesborch to Amerigo Vespucci, but it is more an emblem book than a treatise. See Franssen, “Jan van Doesborch”; Arber, *First Three English Books*, 25–36.
- 25 See Dear, “Meanings of Experience,” for a summary of premodern uses of the term.
- 26 Eden refers to the biblical narrative about the Queen of Sheba, or Queen of the South, and her abundant gifts to the Israelite King Solomon. *Treatyse*, [13]. Here and throughout, my quotations from Eden’s texts use the diplomatic transcription.
- 27 Eden, *Treatyse*, [19]. Eden is probably referring to Agricola’s *De veteribus et novis metallis* (1546) and/or *De precio metallorum et monetis* (1550), which both mention Biringuccio’s *De la pyrotechnia* (the first translation Eden attempted), *Historia Naturalis* by Pliny the Elder, and Theophrastus’s *On Stones*.
- 28 Eden, *Treatyse*, [19–20].
- 29 Georgius Agricola, *De re metallica*, trans. Hoover and Hoover, xxxi.
- 30 Eden, *Treatyse*, [20].
- 31 This manual went through numerous editions. See Schepper, “Foreign Books,” 184–89.
- 32 The letter thanks Cecil for a £20 advance to start a new translation, which would have been nearly equal to Eden’s annual salary ten years earlier. See also Hadfield, “Peter Martyr.”
- 33 Halliwell-Phillipps, *Collection of Letters*, 2–3.
- 34 Vives, *Practice in Writing*. See Hadfield, “Peter Martyr”; Sherman, “Bringing the World”; Matthiessen, *Translation*.
- 35 Georgius Agricola, *De re metallica*, trans. Hoover and Hoover, xxxi.
- 36 Vives, *Practice in Writing*.
- 37 See Arber, *First Three English Books*, xliii. The English translation of Pliny’s *Historia* was indeed published only in 1601, by Philemon Holland, who specialized in classical historical writings.
- 38 Halliwell-Phillipps, *Collection of Letters*, 2–3.
- 39 Eden, *Arte of Nauigation*, [9].

- 40 Dolet, *Way to Translate*, 96. On the fifteenth century, see especially Leonardo Bruni, *On the Correct Way to Translate* (1424–26) and King Duarte, *The Art of Translating from Latin* (1430s).
- 41 Du Bellay, *Defense and Illustration*, 102.
- 42 For a recent comprehensive account of Elyot's legacy, see Sullivan and Walzer, *Thomas Elyot*.
- 43 Thomas Elyot, *The Dictionary*, [3].
- 44 *Ibid.*, [5–6].
- 45 *Ibid.*, s.v. Temperies; *Treatyse*, [120]. See also Wortham, "Sir Thomas Elyot."
- 46 Lucretius, *De rerum natura*, I:136–39, ed. Rouse, 14–15.
- 47 See Hülser, "Expression and Content."
- 48 Cicero, *On the Orator*, I. XXXIV, trans. Sutton and Rackham, 107.
- 49 Cicero, *On Ends*, III. 5, trans. Rackham, 221.
- 50 Braden, Cummings, and Gillespie, *Oxford History*, 11. See Norton, "Translation Theory."
- 51 See Formigari, *Language and Experience*, 1–14.
- 52 Bacon, *Novum Organum*, I. 82, ed. Devey, 60–61. See Jalobeanu, "Discipliningn."
- 53 Bacon, *Novum Organum*, II. 34, 188.
- 54 Edward Arber names Eden "a Man of Science in the Tudor Age" and a forerunner of Francis Bacon in scientific inquiry. Arber, *First Three English Books*, xxii.
- 55 See Burmeister, *Sebastian Münster*.
- 56 Translations between vernaculars through a Latin edition were very common. See Burke and Hsia, *Cultural Translation*; Gordin, *Scientific Babel*, 31–35; Fransen, "Latin."
- 57 McLean, *The Cosmographia*, 104.
- 58 Sergii Shelonin (Semyon Moskvitin, d. 1667), Archimandrite at the Solovetsky Monastery, also produced a cosmography. He was best known for authoring the most comprehensive Russian *azbukovnik* (alphabetical dictionary), with 16,000 entries. See Sapozhnikova, *Russkii knizhnik*.
- 59 In 1555, the merchants who had funded the expedition established the Muscovy Company, where Eden's father was one of the twenty-four assistant consuls. Gwyn, "Richard Eden," 26. On the role of the Company in commissioning Eden's work, see Schepper, "Foreign Books," 188–93.
- 60 Gwyn, "Richard Eden," 20–23.
- 61 Eden, *Treatyse*, [1]. Cf. Münster, *Cosmographiae universalis*, 1083.
- 62 See, among many others, Aphra Behn, *A Discovery of New Worlds, from the French* (1688).
- 63 Bennet, *English Books*, 152–53.
- 64 Aeneas Silvius contradicted Aristotle and followed Albert the Great in asserting that the habitable part of the globe extended south of the equator. Tilmann, *Appraisal*, 54.
- 65 For instance, when describing the Canary Islands, Eden mentions their "great fruitfulness," something hinted at in the Latin text but stressed in the German version. Eden, *Treatyse*, [121]; Münster, *Cosmographiae universalis*, 1099; Münster, *Cosmographia*, dcxxxvii.
- 66 Eden, *Treatyse*, [121].
- 67 Münster, *Cosmographiae universalis*, 1099. My translation.

- 68 Fracanzano da Montalboddo, *Novus orbis regionum*, 79. See Pagano, "Fracanzio da Montalboddo."
- 69 See Crosby, "Ecohistory."
- 70 Eden, *Treatyse*, [120].
- 71 See Grafton, *Defenders of the Text*, for many useful examples.
- 72 Erasmus, "Copia," ed. Thompson, 592.
- 73 See Ryle, *Concept of Mind*; Geertz, "Thick Description."
- 74 See Hadfield, "Peter Martyr," 2.
- 75 Eden, *Treatyse*, [118].
- 76 Eden mentioned this in his petition to the queen; see Arber, *First Three English Books*. In 1555, Eden's *Decades of the Newe World* apparently pledged his loyalty to the new Catholic regime.
- 77 Eden's records on the Muscovy voyages later became part of Richard Hakluyt's collection *The Principall Navigations, Voyages, Traffiques and Discoveries of the English Nation* (1589).
- 78 Sherman, "Bringing the World."
- 79 Quinn, *Explorers and Colonies*, 102.
- 80 See Montgomery, "Mobilities of Science."
- 81 Appiah, "Thick Translation," 817–19.
- 82 Boutcher, "Cultural Translation."
- 83 Skinner, *Reason and Rhetoric*, 7, citing John Austin's *How To Do Things with Words* of 1955.
- 84 Dupré, "Science and Practices of Translation."
- 85 Jacob, *Statue Within*, 9, quoted in Rheinberger, "Experimental Systems," 70.
- 86 Venuti (*Translator's Invisibility*, 1) defines the translator's invisibility following Norman Shapiro: "A good translation is like a pane of glass. You only notice that it's there when there are little imperfections—scratches, bubbles. Ideally, there shouldn't be any. It should never call attention to itself." The translator's agency has been defined as her ability to make independent decisions in the target domain thanks to a Bourdieusian "habitus." See Gouanvic, "Outline."

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