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Shedding the 'Non-Literary' Tag

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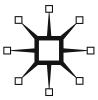

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For Gunilla (†2007), my friend and colleague,
a distinguished academic and
translator of drama.

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1
Introduction

1.1 Communication and translation

The world of the late 20th and early 21st centuries has been characterised as a global society driven by information and knowledge. In this world, it is no longer 'raw materials, land, labour and machinery' which are major assets, it is 'know-how, creativity, ingenuity and imagination' (Leadbeater 1999).[1] One of the main channels for communicating know-how is text, whether it is of a formal kind and explicitly set out as written reports, text books, professional and learned journals or lectures, or of a less formal and more implicit kind, such as letters, emails, other personal communications and conversations including social media, blogs, notes and so on. There are clear historical precedents for the importance of text in the context of science and translation in the form of what Montgomery describes as an 'aggressive trade in books and ideas – the buying and selling of textual matter, whether in piecemeal, altered, or counterfeit fashion' which has 'long been involved in the creating of knowledge systems and the saving of lives, well before the present-day notion of a "knowledge-based society"' (2000: 13).

Translators are an essential part of the co-operative and innovative professional world, which has replaced the industrial world of the 19th and 20th centuries. As Pinchuk observed nearly 40 years ago: 'Scientific and technical translation is part of the process of disseminating information on an international scale, which is indispensable for the functioning of our modern society' (1977: 13), echoing Tytler's much earlier observation that 'good translations' open up to

M. Rogers, *Specialised Translation*

us 'all the stores of ancient knowledge' and create 'a free intercourse of science and of literature between all modern nations' (1978/1813: 3–4). It is of some note here that Tytler ranks science and literature together in this statement.

In our modern society, texts and people circulate in an increasingly multilingual and multicultural environment – sometimes real, sometimes virtual – which offers many new opportunities for communication but is also subject to legal, social, cultural and economic pressures and constraints. These pressures and constraints may be legally binding, as in the case of European Union product liability laws, democratic and sometimes safety-critical as in the case of public-service translation, or commercially-driven as in the case of company marketing practices. As Leadbeater notes: 'The best companies are able to combine different – and often competing – kinds of knowledge, people and cultures. They must be multi-lingual' (1999: 51).[2] A growing academic interest in translation in increasingly specialised areas such as Economics, Business, Finance and institutions, including the role of translators and interpreters in emergency and conflict situations, reflects these trends.[3]

In this 'multilingual, multifaceted world', translation is, according to Bassnett, 'at the heart of global communication […] and has played a central role in the transmission of ideas and literatures over the centuries', with 'great changes in international communication' taking place in the contemporary world, especially in news gathering and websites, leading to an 'increasing demand for translation' (2014: 3, 15, 12). Bassnett is careful to link 'literatures' with 'ideas', reflecting Tytler's more specific concern with both literature and science.

It is against this background that the current volume aims to recast the concept of 'non-literary' translation in a more positive way – befitting the importance of its communicative role in our modern world as well as its complexity – as 'specialised' translation. The term is not a new one but the arguments in favour of this designation are rarely articulated. In this enterprise, specialised translation will not be presented in opposition to literary translation but rather alongside it, reflecting the wordings chosen by Tytler and by Bassnett, even though centuries apart. The approach taken to this task in the current volume is focused on terminology as a key feature of specialised languages, or Languages for Special Purposes (LSPs).

1.2 Why terminology?

In the following chapter, I will make the point that terminological knowledge is a necessary but insufficient condition for specialised translators to do their job. Nevertheless, in order to address what could broadly be called the profile of specialised translation, I have chosen to focus on terminology. I have therefore left myself the job of justifying my chosen focus.

The early narrow scoping of LSP studies as terminological studies is clearly due to the salience of lexical change for the analyst. Authors of texts are also likely to be aware of lexical changes, which are said to happen in what Gotti calls an 'explicit' way when compared to modifications in syntax, of which writers are 'usually unaware' (2003: 166). We might conclude here that the specialist vocabulary of a domain therefore gives us some insight into reflected decisions relating to LSP communication, whether taken by original authors of texts or by translators. This is one way in which agency can be studied.

A significant characteristic of the texts in many LSP genres has been noted by many authors to be their lexical density: nominalisation (see Chapter 3 for more details) has been identified as a key feature of English scientific writing, for example, from as early as the 17th century when 'the verb merely link[ed] the very long nominal phrases coming before and after it' and a 'general tendency' was noted 'towards a loss of importance of the verb, compensated by a growth of importance of the noun' (Gotti 2003: 167). These noun phrases carry a heavy referential load and are therefore key to successful LSP communication. As these phrases are often terms in themselves, by studying them we can gain some insight into a key feature of LSP communication, both textually and referentially.

Technical authors and translators make common use of codified reference sources. But these sources do not cover all aspects of LSPs: we would be hard pressed, for example, to find a reference book of LSP grammar (whatever that might be) or grammars, as the principal syntactic differences from Language for General Purposes (LGP) lie not in the inventory of available structures but in their textual distribution (see Jakobsen 1994a: 10). It is, of course, the case that LSP scholars have charted and analysed semantic, syntactic, morphological and pragmatic aspects of LSP discourses, as well as lexical aspects, but these are not works of codification for the purposes of reference

and re-use. What has been codified in LSP communication is terminology. Since the very early days of LSP studies, termbanks, and later termbases, have, for instance, been an important concern (Rogers 2006a). So the ways in which terminological knowledge and use are documented for future use are of interest for the insights we may gain, not only about the ways in which terminological resources are structured, but also about the relationship between the use of terms in text and their formal codification. This applies to the medium of paper, and since the 1970s, also to various digital formats, which can lead to qualitative changes. Questions therefore arise relating not only to the technological aspects of representation but also to philosophical issues surrounding the structuring of knowledge through logic and ontology.

Given the key role which terms play in the communication of specialist content, as well as the salience which the 'reflected' development and use of lexical items have for analytical purposes, it is no surprise that terminological issues form a significant part of historical analyses of translation, and of specialist writing in general. In fact, what we now call specialised translation, especially in relation to early science, receives as much attention as literary translation in many historically based studies. Specialised translation has a long and distinguished history which is often accessed through one of its key elements: its terminology.

It might be assumed that the scope of any study of 'non-literary' translation on the basis of terminology is highly constrained, being limited to two aspects: (a) in areas of discovery and invention, morphological issues of (primary) term formation and of (secondary) term formation in a relatively culture-free zone; and (b) in more established areas, lexical semantic issues of equivalence. But as we shall see in the following chapters, LSP discourse (and hence its lexical content), and translation in particular where two cultures meet, is certainly not free from cultural issues of many kinds. These include the conceptualisation of different subject fields to the use of metaphor in some genres, as well as pragmatic issues such as rhetorical purpose. These issues all further extend the range of analytical perspectives. The analysis of terms therefore encompasses a wide and informative field of study.

A last point, which in terms of analysis is a trivial one, is the scope of a volume of the present kind. A focus is necessary and in my view,

terminology provides a rich and multifaceted way of approaching the chosen topic of establishing so-called 'non-literary translation' as a significant part of Translation Studies, even an essential part.

1.3 A first stab at the literary *versus* 'non-literary' distinction

The complexity and importance of many types of specialised translation are clearly reflected in the research investment made by bodies such as the European Commission, which recognises how specialised translation and interpreting in the legal field,[4] for instance, is central to human and civil rights and the administration of justice, as indicated in the 2010 Directive on the right to translation and interpreting in criminal proceedings.[5] Another European Directive in the following year addresses patients' rights in cross-border healthcare, bearing in mind the challenges posed by multilingual communication in the medical field.[6] This is stuff which affects people's lives. But an image persists of technical and other types of specialised translation as being the 'dogsbody' tasks of the profession (Franco Aixelá 2004): it's just a question of mugging up on a few terms, which in themselves present few, if any, translation problems because a 'widget' is a 'widget' is a 'widget'. Not only do these assumptions over-simplify many problems of terminological equivalence, they also ignore other features of LSP texts beyond the lexical and the 'technical'. Similar views about a claimed lack of complexity in scientific translation have been noted by Olohan, who points out that 'universalist and positivist perspectives on science' have led to assumptions that 'the translation of science will lack the richness of features that fascinate in literary texts and will provide little scope for translators to make decisions, exercise agency, etc.' (2013: 428) (see also Salama-Carr 2009: 47).

The popular assumption that translators of science exercise little, if any, agency and act rather as 'mere conduits for the smooth transmission of authoritative knowledge' is cited by the sociologist, Steve Fuller,[7] as the reason why the role of translators in the distribution of knowledge is underestimated (Fuller 1998: 54). Summing this up, Fuller makes the point, as more recent work in translation theory such as that of Salama-Carr and Olohan has highlighted, that 'scientific knowledge is not simply reproduced as it gets distributed across

a variety of settings, but rather it is produced anew to suit the needs of new users' (ibid.). This seems like another way of characterising translation as 'rewriting' after Lefevere on literary translation (see Chapter 3). Elsewhere a similar point is made by Jakobsen in the context of specialised translation, namely that cognitively '[t]ranslation is as complicated and multifaceted as text production' (1994b: 48). Fuller acknowledges that translators understand that 'all translations involve tradeoffs', depending on spatio-temporal context, but points out that this insight is not shared by philosophers and scientists, who assume that there is 'a spatiotemporally invariant "content" that is transmitted across contexts' (1998: 55), a view not entirely unfamiliar in the field of translation itself when the challenges of the translation of science are compared less than favourably with those associated with the translation of literature.

Nevertheless, there are, of course, differences in the challenges posed by literary and non-literary translation. Most specialised translations are deliberately made to function as if they originated in the target culture and language. Even with a content-focused informative orientation rather than a more explicitly reader-oriented focus, adjustments are made to accommodate the target audience's expectations of target-language genre conventions. Yet despite the domesticating approach, which aims to mask the provenance of the published text as a translation, in many cases it is often immediately evident that an LSP text *is* a translation, as many genres, including notably product documentation of various kinds, legally require multilingual versions, often appearing in close physical proximity.

While it is becoming increasingly common for the translator to be acknowledged in the paratext of literary publications, regardless of the translation approach and resulting degree of 'visibility' in the text, in specialised translation invisibility in the text itself (assuming a well-targeted translation) is usually accompanied by anonymity (*En traduction spécialisée* […] *l'invisibilité est la norme*[8] [Scarpa 2010: 123]). LSP texts are also often written by authorial teams, or edited to produce an updated version by someone other than the original author/s. The resulting voice is therefore not an individual one. Exceptions to the anonymity norm might include academic writing or company/organisational reports by a named author or authors, although the conventions of the genre usually trump personal style.

In terms of style, literary translators attest to 'multiple rereadings and rewritings' (Peter Bush[9] as cited in Bassnett 2014: 105) in arriving at a final version of their translation: the source text is seen as highly interpretable and is made dynamic through repeated and different translations in so far as 'texts move as contexts change' (2014: 108). Consequently, multiple versions produced at different times and by different translators in the same target language may be in circulation for the same source text all at one time, with opinion varying on the quality of each translation according to many factors, including the time and the place in which it is produced and received. The situation with many LSP texts is different in so far as multiple translated versions of the source text are unlikely to be in circulation, given satisfactory version control. Their locus of publication, for example, on packaging, in product inserts, or in software user interfaces, also precludes the co-existence of multiple versions: as products and services are updated, so too is the accompanying or embedded documentation in line with product cycles or legal changes. LSP texts are also unlikely to be retranslated unless demonstrably error-prone, as their value may be ephemeral and linked to a particular financial, legal, commercial, or manufacturing situation. This marks out a further difference from literary translation, although we cannot necessarily draw the conclusion that ephemerality means a lack of complexity for the translator. Space constraints, for example, pose significant challenges for the translation of packaging, computer-aided design (CAD) and computer-aided manufacturing (CAM) blueprints or webpages, especially for certain language pairs and particular subject matter in which expansion up to 40 per cent is possible, according to some sources.[10] Further challenges are presented by the parallel development of products or services and the accompanying documentation; this leads to the translators – often working in virtual teams requiring careful co-ordination – having to keep pace with constant updating of their source material.

One further important linguistic difference is that literary texts are not necessarily written in the contemporary standard language. Whilst poetry is, of course, by its nature linguistically innovative, as is work in other genres by highly creative writers, even the most banal of literary works can feature archaic language (see, for instance, Jones & Turner 2004 on archaisation), taboo language (see, for instance, Linder 2014) and non-standard varieties (see, for instance,

Määttä 2004; Anderman 2007; Pinto 2009; Jones 2014). To my knowledge, the translators of LSP texts do not face such problems.

There are further well-known differences when it comes to textual function. Literary texts are always expressive (see, for instance, Woodsworth 1988: 121), albeit in different ways according to author, language, genre and time/place, whereas LSP texts are often informative and sometimes persuasive or operative with the focus on the reader's behaviour (Newmark 1988: 47, 55).[11] As noted earlier, it is widely acknowledged that the personal style of the author is a significant factor in literary but not in specialised translation, for which the source text is in any case often anonymous. A further consideration – which is not unrelated to this distinction – is the suggestion that the literary translator may have a close relationship with the author of the source text: *en traduction littéraire les liens entre le traducteur et l'auteur de l'original sont particulièrement étroits* (Woodsworth 1988: 124) ('in literary translation the bond between the translator and the author of the original is particularly close', *my translation*). While Woodsworth asserts this as a categorical distinction between literary and scientific-technical translation – *[i]l y a* toujours *affinité, amour, respect* ('there is *always* affinity, love, respect') (ibid., *emphasis added*) – it may not always be the case, particularly in the translation of non-canonical texts. The lack of rapport between the specialised translator and the original author, with, according to Woodsworth, its accompanying lack of reward or satisfaction, may equally apply to the literary translator of pulp fiction. Just as many writers on translation assume the canon when discussing literary translation, so also is the range of specialised translation often presented or perceived in a restricted way. The views of those scholars more accustomed to writing about literary translation – such as John McFarlane, Ortega y Gasset and Lawrence Venuti – provide interesting insights into the popular perceptions which tend to characterise an oversimplified view of the broad scope of specialised translation, particularly with respect to the claimed nature of its terminology, which is, of course, closely linked to particular subject fields.

In a seminal and closely argued mid-20th century essay seeking to establish the case for 'some new, provisional theory of translation' which is 'designatory rather than hortatory', McFarlane (1953: 92) bases his arguments mainly on literary translation, drawing most of his examples from poetry. In mentioning in passing non-literary

translation, he concedes that such translations – 'part of our material civilization, opening a market here, making a wheel go round there' (1953: 78) – have value but only in so far as 'their ultimate results are valuable'. He argues that such examples of non-literary translation are treated more tolerantly than the translations of 'poetry and imaginative literature', which evoke 'a sediment of doubt, cynicism and scepticism' (ibid.). A similar view is expressed by Bassnett who argues that specialised translators (my term, not Bassnett's) have more freedom than literary translators (2014: 148). Presumably, the higher status usually attributed to literary texts is at the root of this perception, leading to literary translation being viewed as a potential affront to the original. But also implied here is that the utility of the end-product of non-literary translation may negate the complexity of the task.

In his famous essay on the misery and splendour of translation, the Spanish 20th century philosopher Ortega y Gasset even equates the vocabulary of science – that is, its terminology – with a 'language', although he modifies this by then referring to a 'pseudolanguage', which is his way of acknowledging that scientific terms are 'established by a deliberate convention between those who cultivate the discipline' (2004/1937: 50–51), foreshadowing Fuller's rather optimistic notion of LSP as an 'ideal language' (1998).

In a recent publication outlining the way in which his thinking on translation has evolved since 2000, the American scholar and translator Lawrence Venuti describes how he has moved away from a more essentialist view of source material towards a view of 'translation as an interpretive act, as the inscription of one interpretive possibility among others' (2013: 4). Yet his view of 'technical texts in law and science' seems to assume a rather more determinate view – potentially contradictory to that of Bassnett cited above – in so far as he argues: '[t]he routine application of idiomatic usage, standardized terminologies, and precisely defined functions […] serves to limit or pre-empt variation by fixing the form and meaning of the source text.' (ibid.) While it is certainly the case that some text genres, such as contracts and patents (as mentioned by Venuti), have precise genre and terminological conventions in both source and target, other examples cited such as 'medical research' and 'pharmaceutical treatises' may show considerable variation in terminology and form, not to mention content.

The subtle implication that literary translation is still, somehow, more open to criticism and superior in the agency which it affords the translator, also masks the history of translation, which indicates that much early translation was concerned with what we now call 'special languages' in the fields of Medicine, Mathematics and Astronomy, as reported, for instance, for the translation of Greek texts into Arabic in 9th and 10th century Baghdad (Salama-Carr 2009: 45). More examples will be provided in later chapters.

Unrealistic views of the apparently objective and neutral nature of non-literary translation as a category are not, however, confined to writers on literary translation: in the launch edition of *JoSTrans,* an online journal dedicated to specialised translation to which we return below, Peter Newmark (2004) draws what he sees as a clear distinction between literary translation (dealing with the 'world of the imagination') and non-literary texts (dealing with the 'world of facts'). The former is said to be about 'persons', the latter about 'objects', echoing but not exactly representing Schleiermacher's distinction between *Übersetzen* and *Dolmetschen*, that is, between 'texts that reflect one person's unique thought' (see Koller's *Fiktivtexte,* 1992: 272) and 'texts that reflect the extralinguistic world' (see Koller's *Sachtexte*, ibid.) (Mossop 1998: 235). LSP texts usually fall into the latter category, although seminal theoretical science papers could be said to show elements of the former. One such example is Danish scholar Niels Bohr's 1913 trilogy of papers outlining his model of the atom, metaphorically inspired by the orbit of planets around the sun.[12] Binaries such as imagination *versus* facts are further challenged by the recognition that science writing in particular is transcultural, diverse in its epistemological approaches and rhetorical in its construction (Olohan 2013), despite common claims about the universality of conceptual systems in some domains.[13] Studies of the use of metaphor in science are also indicative of an increasing interest in rhetorical and ideological aspects of LSP writing and translation (see, for instance, Merakchi & Rogers 2013 in the context of popular science writing in translation).

Problems with a binary characterisation of translation types are also acknowledged rather less directly and for different, classificatory reasons by Newmark through the expedient addition of a further interim class of texts 'between literary and non-literary texts'; genres such as the essay and autobiography are cited alongside subject fields

such as Philosophy, Religion, History, Psychology, Sociology and Cultural Studies (2004: 10). This rather *ad hoc* enumeration in itself lends strength to the case against a binary literary/non-literary division, especially one characterised as an opposition between persons and objects. A strong alternative view is provided by Pym (2007: online), who argues that *especially* in technical translation, localisation and technology, the act of translation should involve an intimate relation of 'understanding and exchange' with a second person: 'Wherever our work processes and perceptions seem most caught up in networks of things, one must make at least the pedagogical effort to insist on the people.'

1.4 Scoping specialised translation

If people and things fail to distinguish between literary and specialised translation, then where else is there to look? One possibility is to explore the classification of material which characterises various scholarly journals of translation. This classification is made explicit in the statements that journals publish to guide potential contributors, and can be inferred from the articles which are chosen for eventual publication. The only journal dedicated to specialised translation is, to my knowledge, *JoSTrans, The Journal of Specialised Translation*.[14] The first issue of this open-access online publication (http://www.jostrans.org/) appeared in 2004. When the journal was being planned, the team behind it were motivated by what they perceived to be the dominance of material on literary translation published in the available scholarly journals.[15] Over ten years later, there is still a much wider choice of outlets relating to literary translation, as just one example shows. The website *no man's land*[16] – which claims to feature translations of 'fiction and poetry by some of the finest writers working in German today' – provides links to 63 publications with in fact a much wider coverage than just German. They are categorised as follows: literary translation magazines; literary translation magazines with language and/or regional focus; literary magazines with translation focus; and literary translation journals (scholarly/critical). A number of the 'magazines' (one in six) include essays as well as translations. This highlights a further important difference between literary and specialised translation: essays or scholarly articles on literary translation may appear together with actual

translations whereas articles on specialised translation appear in quite separate publication outlets. This relates to the pragmatic aspect of specialised texts, which have a function external to the text itself.

Many scholarly journals of translation, however, set themselves a broad remit, encompassing aspects of both literary and specialised translation, sometimes from a multidisciplinary point of view, sometimes from an intercultural perspective, an issue of 'positioning' (Brems *et al*. 2012: 2). But the question then arises whether the distribution of articles selected for publication reflect this breadth in practice, encompassing both literary and specialised translation. In order to explore this further, a modest selection of articles published in two leading journals,[17] *The Translator: Studies in Intercultural Communication* (first published 1995; originally St. Jerome, since 2014 Routledge) and *Target: International Journal of Translation Studies* (first published 1989, John Benjamins), was reviewed. A total of 77 'research articles' were surveyed from the volumes published in 2004, 2009 and 2014.[18] The aim was to identify possible *tendencies* in publication practice in journals with a broad remit in relation to the coverage of literary and specialised translation: the intention was not to chart the recent development of Translation Studies as a discipline with uncertain boundaries and fast-developing sub-fields. The latter has already been done skilfully by Brems *et al*. (2012).

Both journals set themselves a broad remit, with *Target* taking a more interdisciplinary line and commenting explicitly on possible approaches (theoretical, empirical or applied) where *The Translator* is more explicit about the specific topics in its intercultural remit, including 'commercial and technical translation'. Only *Target* mentions pedagogy.

> *The Translator*:
> translation and interpreting as acts of intercultural communication […] cover[ing] a broad range of practices, written or oral, including interpreting in all its modes, literary translation and adaptation, commercial and technical translation, translation for the stage and in digital media, and multimodal forms such as dubbing and subtitling.
> *Target*:
> welcomes submissions of an interdisciplinary nature. The journal's focus is on research on the theory, history, culture and

> sociology of translation and on the description and pedagogy that underpin and interact with these foci. We welcome contributions with a theoretical, empirical, or applied focus.

Noting the rather different perspectives assumed in the guidance given to authors, and bearing in mind the need for comparison between the two journals as well as the objective of charting publication decisions with regard to literary and specialised translation, the articles reviewed were first classified under six headings: literary, specialised, audiovisual translation (AVT), pedagogy, interpreting and 'theory', understood, for instance, as a proposal concerning the nature or scope of Translation Studies. Two further categories were then added to accommodate articles which did not fit easily into this framework: 'literary + specialised' as it emerged that articles occasionally used data from both areas, and a category of 'profession'. The results are presented in Table 1.1.

Two factors in particular should be mentioned in connection with the frequency distribution reported in Table 1.1: (a) volume 10/2 (2004) of *The Translator* is a Special Issue on 'Key Debates in the Translation of Advertising Materials'; with one exception (Munday on 'Advertising: Some Challenges to Translation Theory') these articles (n = 7) were classified as dealing with specialised translation;

Table 1.1 Subject distribution of articles in issues of *The Translator* & *Target* (2004, 2009, 2014), N = 77

Subject classification	***The Translator (n = 36) f (rank)***	***Target (n = 41) f (rank)***	***Total (N = 77) f (rank)***
Literary	*7* (3)	*16* (1)	*23* (1)
Theory	*12* (2)	*11* (2)	*23* (1)
Specialised	*14* (1)	*8* (3)	*22* (3)
Profession	*0* (6)	*3* (4)	*3* (4)
Literary + specialised	*2* (4)	*1* (5)	*3* (4)
Interpreting	*1* (5)	*1* (5)	*2* (6)
Pedagogy	*0* (6)	*1* (5)	*1* (7)
Audiovisual	*0* (6)	*0* (8)	*0* (8)

and (b) volume 26/2 (2014) of *Target* is also a Special Issue, this time marking 20 years of the European Society for Translation Studies; all six articles were classified as theory as they largely address broad issues connected with 'Europeanness' and the nature of Translation Studies.

What is striking here is the fact that around nine out of ten articles fall into the categories of literary translation, specialised translation, or theory, with the same three items ranking in the top three in both journals. Within the specialised translation set of articles, a range of subject fields is represented including Science and Popular Science (n=4), Medicine/Health Care (n=3), Politics/Administration (n=2) and news (n=2) as well as Economics, Law, Marketing Management, Philosophy, Psychology and Theology (n=1 in each case). No articles were identified on the topic of technical translation, although Economics and Marketing might be thought to fall into the 'commercial' category. The articles on advertising (n=7) cover a wide range of subject fields from food to tourism.[19] The data discussed in the specialised translation set of articles is taken from many languages including Arabic, Chinese, English, German, Hungarian, Norwegian and Spanish. The literary translation contributions are also wide-ranging, covering many languages and cultures including Arabic, Chinese, English, French, German, Turkish and Welsh, as well as different historical periods and many genres from short stories to novels and poetry. The orientations of these articles offer many perspectives, including identity formation, globalisation, power relations, non-standard language and style. The frameworks chosen for the analysis of literary material include Linguistics, Narratology, Postcolonialism and Sociology, demonstrating the interdisciplinarity of Translation Studies, as indicated in the guidance provided by the editors of *Target* and discussed widely in the literature (see Chapter 3). The theory papers range widely over (socio-)culture, Descriptive Translation Studies and History, while sharing with the literary translation articles concerns with globalisation and identity.

The paucity of published articles on pedagogy, AVT and interpreting may be due to a number of factors, such as low submission rates, low acceptance rates, or the nature of the survey sample. In one of the intervening years, for example, a special issue of *The Translator* deals with non-professionals translating and interpreting (volume

18/2, 2012). Other journals may also be perceived by authors as more specialised in their chosen field, such as *The Interpreter and Translator Trainer* (first volume published 2007) for pedagogy, and *Interpreting: International Journal of Research and Practice in Interpreting* (first volume published 1996), although there is no dedicated AVT journal.[20] This gap in the publishing field may also help to explain the high number of AVT articles in *JoSTrans*, which is reported on below.

While this brief review of selected articles published in *The Translator* and *Target* indicate a complex network of ideas, arguments and subject matter in relation to translation as a broad concept, albeit with minimal coverage in some areas in the volumes selected, a survey of articles published in *JoSTrans* can reveal how a particular type of translation is perceived and circumscribed according to a stated policy. Hence, a review was undertaken of articles published between January 2004 and July 2014, and then matched against the journal's own statement about the subject matter of 'specialised translation' which is envisaged for publication.

On the About *JoSTran*s webpage, the following policy statement appears:

> The journal offers a mixture of thematic and open issues, covering the following areas:
>
> - Features of specialised language
> - General and practical issues in translation and interpreting
> - Subject field translation issues, i.e. medical, legal, financial, multi-media, localisation, etc.
> - Theoretical issues in specialised translation
> - Aspects of training and teaching specialised translation
> - Revision and post-editing
>
> We are particularly interested in providing a space where cultural aspects of specialised translation can be discussed and we encourage a comparative approach across languages, subject fields and methodologies. We also welcome contributions from related disciplines such as linguistics, philosophy and cultural studies which touch on issues of specialised translation.
>
> We favour diversity in theoretical frameworks and are interested in innovative approaches in an emerging discipline where immediacy is a key feature.

The survey of articles (N=201) reveals some interesting results, demonstrating differences between the invited subject areas and publication practice, as indicated by the shaded rows in Table 1.2: audiovisual translation and literary translation.

The top-ranking category – General & practical issues in Translation and Interpreting – includes as main themes (in my interpretation) technology, interpreting, multimodality and professional issues. Of these sub-categories, professional issues ranks highest, accounting for 5 per cent (n=11) of all articles. This category also serves well as an example of the difficulties of classifying articles in a rather monodimensional way. Many other articles make reference to professional issues; these include a contribution on interpreting norms such as accuracy, impartiality and confidentiality which were challenged by 'non-professional' interpreters in police interviews, and one on relations between terms in termbases with the aim of supporting professional translators in their comprehension and production in specialised fields. But a judgement had to be made about the dominant theme: in the cited examples, interpreting (as the major alternate to translation) and terminology (as the article dealt with a neglected feature of termbase design of theoretical and practical importance) were chosen. Such decisions were common as many articles cover

Table 1.2 Subject distribution of articles in issues of *JoSTrans* (January 2004–July 2014), N=201

Subject classification	***JoSTrans* (N=201) *f* (rank)**	**Relative frequency *f*/N*(%)****
General & practical issues in Translation & Interpreting	*51* (1)	25
Training and teaching LSP translation	*39* (2)	19
AVT	38 (3)	19
Subject field translation issues	*37* (4)	18
Features of LSP	*18* (5)	9
Literary translation	*13* (6)	6
Revision & post-editing	*5* (7)	2
Theoretical issues	*0* (8)	0

*: figures are rounded.

related themes. In the case of the category Features of LSP, these were hard to isolate from other categories with the exception of terminology, which accounts for *all* items in this set. It was also hard to isolate what could be called 'theory', as *JoSTrans* articles tend to report on empirical data.

The AVT set of articles includes contributions on subtitling, dubbing, audio-description, revoicing and voiceover. Given that 'general and practical issues in translation and interpreting' is a very broad and rather vague category, it is even more notable that AVT articles are the third most frequent overall. Of those items (n=38), around two-thirds (n=26, 68 per cent) deal with feature films, including cartoons, non-documentary TV series and the performing arts, while others deal with general issues of AVT, including overviews of subtitling in particular languages or a particular approach to research. Only 10 per cent deal with documentary or news material, or in one case, audio-description for museums. The question therefore arises concerning the 'non-literary' nature of much writing on AVT. In terms of genre classification, it could be argued that the subtitling or dubbing of fictional material that is often adapted from print genres is best classified as literary. If that were the case here, then nearly one in five of the articles published in *JoSTrans* during the ten-year period could, according to this perspective, be classified as literary (26 of the AVT articles + 13 literary translation articles, the majority of which appear in Issue 22 [January 2014] on 'Crime (fiction) in translation'[21]). For example, issues of humour and taboo language, as well as stereotyping, censorship and gender are more characteristic of the analysis of literary rather than LSP texts. But, as in all attempts to bring some kind of classificatory order into a set of data, different perspectives, and hence other classifications, are possible. So in the present case of AVT, technological issues could be a major consideration: AVT articles also deal with issues such as text-to-speech and DVD technology. Surprisingly, however, given the enormous influence of technology on the practices of translation and an emerging theoretical literature, especially in relation to texts which fall outside the literary field, very few articles in the survey touch on non-AVT topics such as Machine Translation (MT) or CAT (Computer-Assisted Translation) tools including Translation Memory. Articles on localisation (n=7) are included in the *JoSTrans* 'general' category as specified in the journal guidelines, which perhaps masks its technological orientation. Only

three articles on MT and two on technology were noted. Regrouped, these contributions account for only 6 per cent (12/201) of the articles surveyed.

To sum up these two surveys, what stands out from the *Translator/Target* exercise is that articles on specialised translation certainly do feature in almost equal numbers to literary and theoretical contributions, but not in the subject field of technology. In the limited sample discussed here, 'non-literary' translation is therefore shown to cover a range of subject fields beyond what is often considered to be the prototype material of specialised translation. The distribution of articles in *JoSTrans* reveals a broader concept of specialised translation than set out in the original guidelines, highlighting the difficulties of a literary/non-literary binary classification of the subject matter of translation and reflecting disciplinary changes in *one* technology-related area, namely AVT.

1.5 Overview

In approaching the central topic of this volume, which could be glossed as the status of specialised translation, I was aware of a body of opinion which appeared to value literary translation over specialised translation, as indeed reflected in the negative designation 'non-literary' translation. In my experience this phrase is more common in the Translation Studies literature than in the LSP literature. My general goal is to understand what might shape such views and to challenge them where appropriate, through both contemporary and historical considerations, highlighting both similarities and differences between literary and specialised translation as they arise. Further consideration of social media and AVT as relatively new subfields of specialised translation and Translation Studies goes beyond the largely historical approach taken in later chapters of this book.

In Chapter 2, some basic issues are introduced concerning specialised translation, including the significance of subject fields, culture in specialised language, the linguistic scope of specialised language and lexical codification. In some cases popular misconceptions are addressed; in others, the chapter prepares the groundwork for further discussion in subsequent chapters.

In exploring the conventional binary of 'literary' *versus* 'non-literary' translation it quickly became apparent that attempts at

strict classifications were highly problematic, and so I was forced to re-evaluate a number of core concepts, namely terms, text and translation. This is the basis of Chapter 3. Chapters 4 and 5 focus on historical aspects of terminology and translation with a view to understanding the hinterland of much contemporary practice in specialised translation.

The perspective adopted in Chapter 4 points to the precursors of modern practice, such as terminology standardisation and working practices in translation, as well as developments in the practice of terminology and the role of specialised translation in the transfer of knowledge, including the role of glossaries. The general aim of the chapter is to establish the crucial communicative role which specialised translation has played over two millennia.

As specialised translation deals largely with encyclopaedic information and knowledge, its subject matter – not to mention its forms and styles of presentation – is constantly changing, whether for scientific, technological, administrative, legal, or other reasons. Translators of specialised texts are therefore repeatedly faced with changing realities, and therefore with terminological problems. Additionally, translators – both literary and specialised – are confronted directly with differences arising in the process of comparing languages and cultures. Continuing the historical theme, Chapter 5 considers how translators have dealt with lexical gaps which emerge during the translation process, building on the classical trio of borrowing, neology and circumlocution.

The final chapter revisits some of the key issues addressed in the book, including the importance of translation in many aspects of our daily lives. The need for more research studies on various aspects of specialised translation, from disaster management to business, is also acknowledged. Finally, the case for recasting the binary divisions implied by the negative designation of 'non-literary' translation is summarised.

2
Specialised Translation: An Orientation

2.1 Specialised translation: a neglected field?

Writing some 15 years ago, the pioneering translation scholar Wolfram Wilss (Wilss 1999: 9) estimated that 'specialist' translation accounted for some 80 per cent of the total volume of translation (the other 20 per cent being literary and Bible translation). In a lecture a few years later,[1] Geoffrey Kingscott, a leading professional translator, businessman and writer, estimated that over 90 per cent of the world's translation output was accounted for by 'technical and commercial translation'. A similar estimate was made by Franco Aixelá in the new millennium (2004), in an agenda-setting piece for the launch of *JoSTrans*. Yet in the scholarly arena, research in 'non-literary' translation is said to have lagged behind its literary counterpart (ibid.). So, in addition to investigating when 'technical and scientific translation came to be a "research field in its own right"', Franco Aixelá estimates that '80–90% of the professional demand for translators' is accounted for by 'technical translating', whilst a much lower percentage of publications in Translation Studies[2] are concerned with this field (10.2 per cent in the 1990s, rising from 1.4 per cent pre-1950) (2004: 31, 44, 34). The small-scale journal survey reported in Chapter 1 suggests, however, that, some 15 years later, at least in the journals investigated, the balance between research articles concerned with literary or specialised translation may be changing. Nevertheless, that is not to deny that the number of journals devoted to literary issues including literary translation vastly outweighs those dedicated to specialised languages and specialised translation.

Elsewhere, in a study of the transmission of knowledge through translation, Salama-Carr continues with the argument that non-literary translation is not only 'relatively uncharted territory', but also 'deemed a less prestigious case for translation models' (2009: 43). Foreshadowing Salama-Carr's observation, Franco Aixelá's assessment of the technical and scientific field is that it is 'traditionally […] the dogsbody of theoretical discussions of translation' (2004: 29). A similar point is made by Olohan, suggesting that the research imbalance continues to the present day:

> In spite of its centrality within the profession, the activity of translating in scientific and technical fields has been rather neglected by translation scholars, if one compares it with the insights which have been gained from theorizing and analysing the translation of canonical literary and religious texts. (Olohan 2013: 425)

The delineation of what is understood as 'technical' or 'specialised' translation – and indeed the scope of 'translation' itself – is, of course, open to interpretation. For the purposes of his classificatory historical hunt through publications on translation, Franco Aixelá selects terminology as a crucial characteristic: 'the translation of any text or text type in which there is a specific terminology belonging to a professional or academic field' (2004: 32). The role of specialised translation and the growing recognition of the importance of 'terminology work'[3] are cited as particularly significant in the post-1945 world of what Wilss has called 'language mediation' (*Sprachmittlung*), that is, translation and interpreting (1999: 73, 83). Examples provided by Franco Aixelá focus on the subject matter rather than genre, including Information Technology, Business, Medicine and Law, the latter being the most widely discussed. Franco Aixelá's definition would also cover scientific texts, although there is some ambivalence about the scope of 'technical' in this historical survey of publications. Whilst the term 'specialised translation', like the German *Fachübersetzen*, covers the full range of disciplines across Arts and Humanities, Social and Natural Sciences, as well as Engineering and other technologies, it is often more narrowly understood to mean 'sci-tech translation'. But even here, a useful sub-categorisation distinguishing 'scientific' from 'technical' texts and therefore also translation has been proposed by Byrne (2012), who elaborates on an

earlier categorisation by Pinchuk from the 1970s (Pinchuk 1977). The distinction is useful – although not always acknowledged – because Byrne shows that certain generalisations can be made about each sub-type. He suggests that the primary function of what he calls 'technical texts' is informative,[4] whereas a 'scientific text will *discuss, analyze and synthesise* information with a view to *explaining ideas, proposing* new theories or *evaluating* methods' (2012: 2, *emphasis in the original*). Hence, Byrne concludes, the language used to fulfil these communicative aims is different, with consequences for choosing appropriate translation strategies.

As Byrne usefully reminds us, the primary readers of technical texts actually want to do something else: the text is a means to an end such as cooking a meal or constructing a piece of furniture; in deference to the reader, the language should therefore be 'simple'. This is glossed as using 'simple declarative information' rather than 'complex sentences' and presenting the information chronologically or logically showing cause and effect (2012: 48). Scientific texts, on the other hand, may contain 'passages of text composed of quite long, complex sentences involving the type of language more commonly associated with more conventionally creative types of text', including the creative use of metaphors to name new concepts[5] (2012: 49, 3). The label 'specialised text' – or 'LSP text' – is therefore by no means narrowly constrained to a highly restricted set of genres or limited subject matter, and translators even of 'scientific and technical texts' would need to be versatile and inventive. Rather unhelpfully, some authors – possibly reflecting the German conceptualisation of *Fachtexte/-übersetzungen* – choose to understand 'technical translation' as the generic term for all categories of LSP translation (Wright & Wright 1993b: 1). That is not the case here: throughout this volume, 'specialised' or 'LSP' will be used to indicate the broad field of 'non-literary' translation.

Statistics estimating the distribution of professional translation activity – whether literary or specialised – necessarily involve much extrapolation and many assumptions, and need to be interpreted in relation to specific factors associated with particular locations and times. Historically, some types of translation have consistently been assigned a lower status than others. This may be because of the particular target language, as in the medieval period when translation into the vernacular, English, rather than Latin or even French,

was regarded as low-status work, 'mak[ing] its appeal only to the unlearned' (Amos 2001/1920: 9). For rather different reasons to do with the supply of source material linked with the current much higher status of English as a global *lingua franca*, the volume and proportion of literary translation is likely to be lower in English-speaking locations as most translation of this kind – as also of much audiovisual material – is currently out of English not into English (Bellos 2012: 139). In the contemporary world, specialised translation is also often out of English. One further reason for this is the production of multilingual versions of documentation accompanying a product or service from an 'internationalised' template (frequently English), which aims to reduce the need for cultural adjustments (see also Scarpa 2010: 118).

Related estimates such as the global number of translators – as opposed to translations – are fraught with difficulties such as the failure in many statistics to distinguish between translators and interpreters, and the problem of defining who exactly is a 'professional' translator, as the job title is not a restricted one. A recent report on the status of the translation profession in the European Union (Pym et al. 2012) calculates that 'awaiting better data' there are currently 330,000 professional translators in the world (2012: 139). Whilst literary translators are reported to earn below the minimum wage in most countries in Europe (2012: 13), they are also afforded special status in some tax regimes, reflecting a perception of cultural value (2012: 19–20) normally not attributed to 'other' types of translation. In many European countries, literary translators are also professionally organised in separate professional associations, further signalling that they understand their interests to be different from those of their 'non-literary' colleagues. In fact, it seems that translators perceive their identity in increasingly specialised ways. A recent survey of 217 associations for translators and interpreters shows that literary translators, sworn/authorised translators and interpreters, conference interpreters, public-service interpreters and audiovisual translators now have their own associations in many locations (Pym 2014).

Given the relatively low proportion of research publications on what he calls technical translation tracked in Franco Aixelá's 2004 survey compared with those on literary translation – 10.2 per cent *versus* 22.3 per cent between 1991 and 2000[6] – we could also conclude that the '*academic* status of technical texts, terminology and

language for specific purposes' (Franco Aixelá 2004: 44, *emphasis added*) remains low. In the 20th and 21st centuries, the perceived banal and often ephemeral subject matter of some specialised translation can be seen as a contributing factor.

These sometimes rather negative professional and academic conclusions bring us to the issue of designation and definition: what exactly is 'specialised translation' and how can it be scoped and defined in a positive way alongside rather than in opposition to literary translation amidst an array of terms such as 'non-literary translation', 'documentary translation', 'technical, commercial, and scientific translation'? The vehicle for specialist communication – special language or *Fachsprache* – has also been negatively defined as 'non-literary prose' (Durrell 2003: 43). The binary nature of inclusion/exclusion not only has the potential to mask possible similarities, it may also misrepresent the complex nature of the object itself. As Hermans (2013: 77) wryly notes when tackling the broader question of what is (not) translation, literary scholars 'gave up trying to define literature a long time ago', further problematising for my current purposes the concept of 'non-literary' translation.

Despite, or perhaps even because of such elusivity, it is still desirable to engage with the issue of how to scope the object of study – here, specialised translation, which is, of course, predicated on an understanding of 'specialised language' or 'LSP' or, more accurately, LSP*s*. Notable early publications on the topic include Sager, Dungworth & McDonald's *English Special Languages. Principles and practice in science and technology* (1980), Kocourek's *La langue française de la technique et de la science* (1982),[7] von Hahn's *Fachkommunikation* (1983), Trimble's *English for Science and Technology. A discourse approach* (1985), Fluck's *Fachsprachen* (1985; 1st edition 1975) and Hoffmann's *Kommunikationsmittel Fachsprache* (1985). A biennial European LSP Symposium was launched in Vienna in 1977 and a handbook, that scholarly marker of an academic discipline which has come of age, appeared in 1997 (Hoffmann, Kalverkämper & Wiegand). An important series of scholarly works was launched in 1985 by the German publisher Gunter Narr,[8] edited by Hartwig Kalverkämper: *Forum für Fachsprachenforschung*. To date, an impressive 118 volumes have appeared. The Peter Lang series Linguistic Insights: Studies in Language and Communication, edited by Maurizio Gotti, dating from 2001, also boasts an impressive number

of publications on topics in LSP amongst its 200 volumes to date. I mention these publications here as indicators of the scholarly weight increasingly attached to the study of specialised languages, howsoever defined in particular cases. As Gotti himself notes in his 2003 volume on Specialized Discourse, there is 'disagreement, and at times opposing views on such fundamental aspects as the very notion of specialized discourse', often relating to the closeness or distance of its relationship to the general language (2003: 9). However, of particular note here is that the crossover between the LSP and Translation Studies discourse communities has been modest at best.

As whole volumes have been dedicated to scoping the study of LSPs, for the purposes of the present study, I will for practical reasons of space assume that LSPs fulfil professionally or subject-related communicative purposes in particular situations between experts of various kinds (from academic/theoretical to 'techies' and marketeers) and a whole range of recipients from experts to laypersons. LSPs vary 'horizontally' from subject field to subject field (and are hence lexically differentiated through different sets of terms/meanings), and 'vertically' on a cline of expertise involving both authors and readers. LSP texts are pragmatically constrained, usually fulfilling what can broadly be called informative, instructive and persuasive functions. The emphasis is on the written language, as translation is usually understood to operate in this mode.

Alongside the growth of interest in LSPs, a concomitant increase in scholarly interest in the translation of LSP texts can also be observed through early publications such as Maillot's *La traduction scientifique et technique* (1969, 2nd edition 1981), Jakobsen's *Translating LSP Texts: Some Theoretical Considerations* (1994), Stolze's *Die Fachübersetzung. Eine Einführung* (1999), and more recently, Scarpa's *La traduction spécialisée. Une approche professionelle à l'enseignement de la traduction* (2010),[9] as well as the specialised translation section of the European LSP Symposia proceedings published since 1979 (for example, Ahmad & Rogers 2007, 14th Symposium), and dedicated journals such as *JoSTrans*.

2.2 LSP, translation and subject fields

The brief outline above indicates the multidimensionality of LSP communication, but the designation of LSP in languages such as the

German *Fachsprache* (see also the Swedish *Fackspråk*) – and hence, *Fachübersetzen* – suggests that subject-matter knowledge is considered as probably the 'most central issue in the literature on scientific and technical translation or specialized translation in general' (Krüger 2013: 310). *Fach* can be translated as 'subject field', 'domain', or 'discipline' (hence: 'subject-field translation', that is, anything from Anthropology to Zoology), where the less specific designations in English,[10] French (*la traduction spécialisée*) and Italian (*la traduzione specializzata*) simply indicate some kind of 'specialism', nevertheless still usually interpreted as a particular subject field which translators define in their professional profile alongside their translation languages. Directories or registers of translators often use subject specialisms as a search filter. A good example is provided by the UK Institute of Translation & Interpreting which lists 11 'subject areas' alphabetically, from Architecture & Building to Transport, with a further sub-categorisation depending on the choice of subject area.[11] For 'Business', for example, a more specific list of nine further categories is provided, from Advertising to Marketing. Whilst clients often find it difficult to understand specialised translation as anything other than a word-for-word substitution exercise lacking the creativity or complex decision-making associated with literary translation, both novice and experienced translators of non-literary genres need to acquire specialist knowledge in order to establish a frame within which they can make well-motivated translation decisions if they are to produce a coherent target text[12] (see, for instance, Sørensen 1994). As Byrne notes, novice translators 'are asked all the time to state [their] specialisms'; for experienced translators, the challenge consists in:

> stay[ing] abreast of ever-changing subjects where knowledge and expertise, which has taken years to accumulate, can be rendered obsolete as a result of a single journal paper or patent application, or in the case of software with the release of a new software version. (Byrne 2012: 42)

Whilst 'obsolete' is perhaps overstating the case here, a slightly different take is offered by Kastberg in relation to translator training. He usefully argues that 'non-literary' translators (his term) should be trained to be 'personal knowledge managers' rather than 'subject

matter experts', as the student's ability to cope with any given subject matter' is of 'primary importance', as it is indeed for professional translators, who 'will be forced to manage new and changing subject matter each and every day' (2009: 97–8).

The development over recent years by professional associations, large institutions such as the European Commission and universities of a plethora of courses aimed at translators working in specific subject fields bears witness to the need for continual (re-)training. The biennial course in financial translation run by the *Société française des Traducteurs* is a good example of this. In Germany, the *Weiterbildungsgesellschaft*[13] of the *Bundesverband der Dolmetscher und Übersetzer* (BDŰ) stages 250 seminars a year involving 3,500–4,000 participants. Many of these courses are related to special subject fields.[14] And in the Netherlands, 80 hours of continuing professional development over five years has been obligatory for registered state-accredited translators since 2010.[15] Indeed, the modern-day translator, especially the freelancer, needs to be conversant not only with developments in relevant subject fields, but also with technology, legal issues such as contracts, invoicing, marketing of their services, project management and terminology management, not to mention ethical issues. Many courses in these areas of modern practice are offered by professional associations, often through webinars. Literary translators also need, of course, to be familiar with many of these professional skills, but they are not generally expected to have subject-field expertise, at least not as part of their professional profile.

2.3 Specialised translation and culture

Another source of potential opposition between literary and non-literary texts, and hence their translation, can be identified in the debate about 'culture',[16] which has often been assumed to be of clear relevance to literary translation, but of less, if any, relevance to specialised translation. Such assumptions tended to focus rather narrowly on scientific and particularly technical translation. However, it will be argued here, with Koskinen, that 'the concept of culture has permeated Translation Studies, more or less regardless of theoretical background' (2004: 144).

The 'story' of a growing awareness of cultural factors in specialised translation is one which shows some synergies with that of the

well-known 1980s 'cultural turn' in Translation Studies. This charted a turn away from a linguistic encoding/decoding approach[17] embedded in the discipline of Applied Linguistics – not the obvious home for literary translation[18] – and from what had been considered the key notion of equivalence, to 'culture' (see, for instance, Lefevere & Bassnett 1990) and the importance of 'contextual knowledge of both source and target systems' (Bassnett 2014: 31). Literary scholars of translation were also concerned to rescue translation from its assigned status as a derivative 'second class activity' in relation to original authorship and to broaden the area of study to include both 'high' and 'low' culture in keeping with academic developments of the time (Bassnett 2014: 21, 25, 26).

It is generally agreed that the modern debate about the importance of culture was initiated by scholars of literary translation, but the problems of culture-bound terms in translation have been discussed in the Translation Studies literature from a strategic point of view since the 1980s (see, for instance: Ivir 1987; Franco Aixelá 1996; Mailhac 1996a, 1996b). These cultural elements in LSP texts are often brought to light by the very act of translation precisely because the translator identifies different source-culture and target-culture mappings and customs. One implication which could be drawn from the turn in *literary* translation is that 'non-literary' translations, in which 'culture' is often assumed to be of minimal importance, could continue to be usefully analysed from a purely linguistic perspective. Indeed, such a view is embedded in the suggestion by Lefevere & Bassnett (1990: 7) – apparently differing from Bassnett's later view, as noted in Chapter 1 – that the translators of literary texts 'are likely to be given much more leeway' than the translators of texts which have either to do with 'the beliefs of members of a culture' such as sacred texts, or with 'their bank accounts', which I understand here to be representative of specialised texts.[19]

However, although it is not well acknowledged, as early as the 1950s culture as well as language was being cited as an essential factor in translation generally (Casagrande 1954, cited in Jumpelt 1961: 6).[20] In the early 1960s, Jumpelt had pointed out a misconception which still prevails in many circles over 50 years later, namely that there are no real problems in scientific and technical translation as the vocabulary is international and the grammar is straightforward (1961: 8–9). Pinchuk (1977: 20) also warned against exaggerating the

simplicity of technical, or what she calls 'service' (as opposed to 'aesthetic') translation: 'It has been thought of as a kind of engineering operation in which standardized components are fitted together, or as a similar process to the solving of a jigsaw puzzle. But these analogies are very misleading' (ibid.). The role of cultural factors – including differences in genre conventions – in specialised translation has since those early times been demonstrated more widely (see, for instance, Reinart 2009 for a comprehensive overview) particularly in relation to the configurations which map conceptual fields, not just in the obvious example of legal translation (for example, Caliendo 2007) and commercial, political and institutional discourse (for example, Candlin & Gotti 2004), but also in science and technology (see, for instance, Stolze 1999: 227–29; Aguado & Álvarez 2007; Kastberg 2007; Rey 2007; Hempel 2009; Stolze 2009; Öncü 2013, to name but a few). For example, differences in the way the telecommunications business is organised in the USA and Spain account for terminological problems in a Spanish version of the popular magazine *Byte* (Aguado & Álvarez 2007). Problems can even arise for designations of identical objects, especially in the case of terms which have a metaphorical base: so we can compare the German technical term *Negativform* with the English 'female mould', and *Steckerstift* ('plugpin') with 'male stick'[21] (Stolze 2009: 127). Such terms are not culture-free as the act of translation reveals by inviting a direct comparison of the semantic association between 'negative' and 'female' on the one hand and between the more active, more positive 'plug' and 'male' on the other. Similar developments in the analysis of intercultural issues have also been taking place in technical writing (see Yu 2012 for further references).

Perhaps the most well-known contemporary LSP translation context for the role of culture is localisation, which was defined early on in its development as '[t]he process of adapting and translating a software application into another language in order to make it linguistically and culturally appropriate for a particular local market' (Esselink 1998: 2). The scope of 'culture' extends here to include technical issues, some of which are straightforward offering little or no choice to the translator, such as the format of measurements, dates, times, numbers and currencies; other less pre-determined choices include layout changes owing to different character sets or writing direction, and alphabet keys selected for shortcuts to match

the relevant word in the target language. To adopt Edward T. Hall's well-known metaphor of the iceberg of culture,[22] these features are all clearly visible above the waterline and present routine problems (see also Reinart 2009: 79ff; Scarpa 2010: 112–13); they are not linked to what might be called underlying cultural values. Discretion and understanding are, however, needed to deal with broader issues such as the selection of culturally appropriate pictograms, icons, images and sounds – some of which are metaphorical and culturally marked, such as the *recycling* bin on computer screens – for which underlying beliefs and values are significant.

Indicative of an emerging broader awareness of translation – at least, where the expectations of the target-culture readership determine the translation brief – Esselink's second edition of his seminal 1998 book *A Practical Guide to Software Localization* quickly drops the restriction of localisation to 'software', becoming in 2000 *A Practical Guide to Localization*. If we accept that cultural adaptation is always a part of translation, then localisation can still be described as a category of translation associated with certain genres and subject matter. Localisation as a translation activity has also brought a new perspective to the study of the translation process as it links with other activities such as globalisation and internationalisation, shedding light on the importance not only of the economic context for translation in the form of marketing needs but also of controlling the content of source texts – often in English – to minimise cultural references such as sporting and other metaphors, leaving only essential changes to be made in the localisation stage of the process. So although localisation focuses on cultural adaptation, its source documents, if 'internationalised', can be blandly 'a-cultural', outside a specific range of culture-specific items required by the nature of a particular text, a concept which in itself has become more complex in recent times (see Chapter 3). Literary texts by contrast are unlikely ever to be written for translation in an a-cultural way.

2.4 LSP beyond the lexical

The occurrence of specialised vocabulary, or terms, created and used by people to communicate ideas about their specialised worlds is, as noted earlier, a common and important feature of LSP texts in any subject field. Indeed, it is now a commonplace that terms are a

key element in specialised or professional communication and that translators are therefore often themselves *un peu […] terminologues* (Scarpa 2010: 60).[23] However, the ubiquity and communicative importance of terms in LSP texts has not always been interpreted in a positive way when compared, for instance, to the exigencies of literary translation, as remarks by literary translation scholars noted above have demonstrated. Franco Aixelá (2004: 29) sums up what he rightly sees as a misconception thus: 'literary (including Bible) translation has always been in need of serious reflection, whereas technical translating only [*sic*] needed good technical practitioners who knew their terminology'. Two points follow here. Firstly, translating terms is not as straightforward a task as implied. This is a topic to which I have already alluded in this chapter and to which I shall return throughout this volume. Secondly, terminology, whilst being in many ways the most salient marker of LSP texts, is by no means the only one (see, for instance, Scarpa 2010: 24, 25, 57)[24]: as Scarpa points out, if the only difference between LSPs and LGP (Language for General Purposes) were lexical, we could not account for all the other contextual and situational variations which are manifest in sci-tech LSP texts (2010: 13). The same can also be said to apply to other LSP texts. Let us briefly consider some ways in which LSP texts differ from general-language texts beyond the lexical (see, for instance, Stolze 1999: 21–4; Scarpa 2010: 35–59), before returning in more detail to the issue of terminology.

LSP texts always have a communicative purpose which is situated in a particular socio-cultural context, often closely linked to a particular professional discourse community. The range of communicative functions which such texts cover is very broad.[25] LSP texts can inform, instruct, persuade, warn, regulate, describe, explain. What they do not do is entertain, with the possible exception of popular science writing (Byrne 2012: 28, 49). As these functions are (a) performed within a particular socio-cultural context, often associated with a particular domain, in a particular language; and (b) incorporate different purposes for different readerships, the range of forms which the actual texts take on is also highly varied. The conventionalised and socially recognised textual forms are, of course, better known as 'genres'.[26] The function of some genres is self-evident and non-variable; a contract, for example, is always operative (to use Reiss's text typology [Reiss 1971]) with the aim of

regulating the behaviour of the parties to the contract; the linguistic choices available to the text author are therefore limited and highly conventionalised. Terms are often defined as an integral part of the contract or agreement. Other genres are more malleable and functionally varied: a letter may be operative, as in a promotional marketing letter, which could relate to any number of different domains, expressive if of a personal nature (and therefore not 'specialised'), or informative as in the case of a business letter from a bank informing their client of a transfer of funds. If we take all these features into account, what emerges are LSP texts which are multidimensional artefacts, the relevant dimensions being communicative function (related to purpose), conventionalised form (genre), domain (sometimes hybrid) and language (or language variety). In order to produce texts which are fit for purpose, the creator of LSP texts – in which we include the specialised translator – must therefore be a versatile writer with a sound knowledge of genre formats including all aspects from layout to tone-of-voice as well as of domain subject matter (as noted, closely linked to terminology). Crucially, the LSP text author/translator must also have the ability to use language to achieve the relevant communicative function. The skilled writer develops a nuanced understanding of the motivations for decisions at both the microlinguistic and the macrolinguistic levels. And the translator has to be well versed both in the source-language patterns for interpretive purposes and in the target-language patterns for production purposes, making decisions about the possible mappings of the two and how best to shape the new target text according to the translation brief, bearing in mind any cultural differences in both the designations and the mapping.

The importance of linguistic decisions for the translator at the microlinguistic level can be illustrated by the use of certain phrases in French court judgments. The phrase *attendu que* ('given that') signals the arguments of the parties in the case and of the decisions of the higher courts, whereas a parallel set phrase, *considérant que* (also 'given that'), signals the arguments from a lower court (de Leo 2011). Authors of such texts – that is, judges – are, as expert professionals in their discourse community, clearly aware of such requirements. A legal translator operating from English into French also needs such an awareness when exercising a linguistic choice of this kind, that is, one that has functional value in the given genre in the target

language which is not expressed in the same way in the source language. By comparison, literary authors can in all cases reflect on the phrasings they choose to express their ideas; their choice is a free one in the sense that their decision is largely one of personal style, which the translator generally aims to reflect in the new text but which does not necessarily have a specific functional value. So from this perspective, the literary translator certainly does have greater freedom.

At the macrolinguistic level, at issue are features such as the order or inventory of 'moves', understood here after Swales (1990) as identifiable parts of a text – not necessarily corresponding to headed sections – which are conventionally used in a particular genre, sometimes triggered by key phrases. The importance of the order in which the content of an LSP text is presented for fulfilling its purpose can be illustrated by the various patterns which are available in the authoring of a document: the author has many choices when deciding how to organise the content, often but not always constrained by the genre as specific macrostructural moves. The following patterns are, for instance, cited in the technical writing literature (mainly based on Markel 2004, from whom most of the examples are also taken). The first four patterns are exemplified below; more information on the remaining patterns can be found in Markel.

a. Chronological
b. Spatial
c. General→specific
d. More important→less important
e. Compare and contrast
f. Classification and partition
g. Problems-methods-solutions
h. Cause-effect

The first two patterns are iconic. So, for instance, in a set of instructions such as the following, version (a) is preferable to version (b): (a) *Always disconnect the device from its power supply before opening it.* (b) *Before opening the device, always disconnect it from its power supply.* Depending on the purpose of the text, a mixture of patterns may be used. For example, a time-line established in an accident report through a chronological presentation of events (what happened?)

may be supplemented by a description of the accident scene based on the location of various items and people (where did it happen?). A campus guide could also be organised according to space, signalled by various linguistic markers such as 'in three zones', 'at the bottom of', 'next up the hill' and so on (Markel 2004: 162–65). The 'general→specific' ordering – 'used when readers need a general understanding of a subject before they can understand and remember the details' (Markel 2004: 165) – is typical of many public information brochures where, at the beginning of a document, a lay audience needs a framework of reference in an unfamiliar area such as the law; a guide on *How to obtain probate* published by the UK HM Courts and Tribunals Service provides a good example of this.[27] The more important→less important pattern is typical of newspaper reportage, 'recogniz[ing] that readers often want the bottom line – the most important information – first' (Markel 2004: 167). A chronological ordering would be rather dull and would be likely to irritate the reader who, typically for this genre, may not wish to read the whole article. The reverse order from less to more important can, of course, be used to delay bad news in a letter or a report.

Writers of literary pieces also choose, of course, how they structure their work. Novels and short stories may, for example, follow a linear – or chronological – narrative structure in which the plot unfolds step by step. In other cases, the way in which the 'story' is presented in the 'discourse' of the work may not map at all. In Narratology, 'story' can be understood as a way of 'mak[ing] sense of events' which is more than simply a 'mere sequence of events' (Culler 1997: 82, 84). There are indeed many ways of making sense of events and therefore many possible stories, each of which has its own logic, in contrast to scientific writing, which aims to explain or make sense of events 'by placing [things] under laws', demonstrating a cause-effect narrative (ibid.). When it comes to translation, Culler argues that 'plot can be preserved in translation' both interlingually and intralingually (for example, from short story to comic strip), except in the case of poetry (1997: 84). So the literary translator can retain the source-text plot in the target text. Can LSP translators retain the organisation of the source text in the target text? Are there intercultural genre differences which would lead to a re-organisation? It is certainly the case that the moves in some genres are differently ordered (see, for instance, Markel 2004: 161).[28] Examples include legal documents

where long-established convention plays a strong role such as judgments and patent applications. In the case of court judgments, Stolze reports different orderings for moves such as the introduction to the judgment and the judgment itself between courts in the USA, France and Spain on the one hand and Germany on the other hand; the inventory of moves itself is also different, with the interim judgment, facts of the case and reasons for the judgment occurring in some but not all (1997: 119). In the case of patent applications, Göpferich (1998b) reports that in Germany, the actual claim is assigned its own section immediately after the administrative/technical details and preceding the description of the invention, whereas in British patent applications the claim is embedded towards the end of the description. Further examples of differences in genre conventions – in this case between US English and German – include CVs and testimonials (Stolze 2009: 131), both of which frequently require translation as part of a job application. Such features are, just as many features of software localisation, above the waterline, that is, observable once relevant target-language model documentation has been identified.

Of greater interest from a research point of view would be cases where, say, assumptions about writer-reader responsibilities for the success of the communication differ. Anecdotally, in my own experience when teaching at a German university, the students preferred to read academic textbooks in English, their non-native language, as they found them more accessible than German textbooks. Writers in English are expected – with scholarly impunity – to move closer to their readers' perspective (see, for instance, Kreutz & Harres [1997: 181] who characterise German academic writing style as 'author-oriented' and English as 'predominantly co-operative, reader-oriented'). Such traits or 'text orientations' are much harder to isolate in terms of overt and specific textual characteristics: they are prone to intercultural variation in many genres and have to be distinguished from levels of subject specialisation, as outlined, for instance in Scarpa (2010: 18–22). The expertise – and agency – of the LSP translator, is crucial in such cases.

2.5 LSP and terminology

In the early days of LSP studies in the 1970s, when academic interest was first focused in a systematic way on language beyond

literature, terminology – already noted here as the most immediately salient feature of specialised communication (see also Bowker & Pearson 2002: 26) – provided the main point of study. Indeed, one of the main roles of one of the first of two western journals founded in the 1950s and dedicated to translation, the Canadian journal published by the University of Montreal, *Meta*, was to 'offer English-French terminologies for all possible technical fields' (Franco Aixelá 2004: 38). Whilst successful communication depends on the consensual use of language, as well as on cognitive operations such as our ability to draw inferences from less than determinate utterances, it relies in particular on the consensual use of the terms which map the many facets of our specialist knowledge. But this consensus is especially hard to achieve both within and between societies in which knowledge is growing rapidly and new subjects are emerging, often through the merging of existing subjects, for example, Archaeological Microbiology, Biogeo-chemistry, Biotechnology, Ethnobiology, Neurophilosophy, Software Engineering and so on. The phenomenon is not a new one: Gotti (2003: 171, 153) reports on a 'dramatic expansion of the English vocabulary and the coining of thousands of new words' during the 16th and 17th centuries as science developed apace and vernacular languages began to overtake other languages (Latin in particular) as the new means of expression. Writers and translators had to deal with new concepts and an awareness that the words so formed should provide 'a stricter delineation of meaning' (Gotti 2003: 155, citing Robert Boyle). In modern parlance, words used for special purposes should have greater precision than those used in the general language.[29]

Terms as they are used in texts are an important referential source of information about new developments, but they also tend to be variable and unstable in many contexts. Even 50 years ago, rapid growth was being reported in the natural sciences, such as 100 new terms per month in Chemistry (Fluck 1985: 32). In Biology the vocabulary was said to be growing at an annual rate of 10 per cent in the 1980s (Kelly & Smith 1983). The growth in the rate of specialist dictionary production also accelerated in the 20th century, with just 20 or so works being produced internationally per year between 1914 and 1940, a figure which had grown to over 500 by the latter part of the last century (reported in Delisle & Woodsworth 1995: 240). But

with rapid growth comes greater variation and higher rates of attrition: hence the limited value in our modern world of many paper specialised dictionaries in particular.

Attempts to standardise the use of vocabulary can act as a potential restriction on the rate of change, since specialised vocabularies, even in relatively established domains, are still dynamic: growth is not simply quantitative, it can be qualitative, particularly at times of revolutionary change. When, for instance, over the course of the 18th century, a new term – Lavoisier's 'oxygen' – emerged to replace an old term, Stahl's 'phlogiston', to explain phenomena related to combustion, it also signalled a new way of conceptualising part of the physical world. Texts from nascent subject fields are therefore not at all unusual in their tendency to exhibit change and variation. Terms in newly emerging domains are simply more variable than most. Recent research has also acknowledged that there are cases where even synchronic variation is not arbitrary: it can be productive and functional (see, for instance, Rogers 1997; Bowker 1998; Freixa 2006). Such variation is rarely captured in dictionaries or other codified terminology resources whose function is to stabilise, at least for a given time.

A quick glance at the LSP literature is enough to establish the crucial importance and complexity of many types of LSP communication for people's daily lives, sometimes crucially related to the use of terms. Exposure to disease has been a focus of human interest for millennia, but even here conceptual and cultural difficulties can be encountered when mapping medical knowledge interlingually through the terms used in the relevant domain. Antia, Mahamadou & Tamdjo (2007), for example, report on the complexities of mismatched ontologies – or 'knowledge configurations' – in the field of animal health between veterinarians and cattle farmers in Cameroon, which, they argue, lead to bilingual communication problems (French and Fulfulde) and hence to human disease. It is clear from their empirical work that the problem is a fundamental one – not simply an issue of checking off and matching lists of the correct terms – as the veterinarians identify 13 diseases in the field of cattle disease, whereas the farmers identify only nine. Such disparities in conceptual structures and terminological use raise challenging questions for attempts to systematise bilingual terminology in codified collections.

2.6 Terms, text and lexical codification

As realisations of the language system and language use respectively, terminology collections and texts enjoy an interdependent relationship. To help them create texts, writers, including translators, use codified sources; in turn, the creators of these codified sources, again including translators, use data from texts as sources for representing specialised lexical systems in a codified way. In some cases, the writer and the compiler may be the same person, as is often the case for LSP translators (we can recall Scarpa's designation of specialised translators as *un peu terminologues*). In moving between texts and terminology collections, they have to take into account the different nature of the two environments in which they are working (Rogers 2001). One of the differences can be illustrated by the practice of less than efficient medieval copyists who, when compiling glossaries from texts, sometimes extracted the word to be glossed in its case-inflected form (Collison 1982: 47).

Modern-day translators are accustomed to moving from codified sources to text, but are also quickly finding strategies for what I have called 'text-text' solutions, particularly using the World Wide Web. But, like the poor medieval scribes, modern translators are less accustomed to codifying textual data for re-use and can benefit from training in good practice (Korkas & Rogers 2010) if they are to avoid the rather grim view of:

> the translation dictionary as a stockpile of equivalencies or near-equivalencies; a miscellaneous grab bag of fossilized translations – equivalencies that were once translations in certain contexts and under certain conditions but are now mounted in a dictionary like so many dead butterflies in an album. (Steiner 1989: 256)

Variation as exhibited in the use of terms for communicative purposes may, of course, impair communication, a matter of some concern in safety-critical domains and situations. Writing from the perspective of compiling terminology collections for standardisation purposes, one of the early pioneers of the then emergent discipline of Terminology, the Austrian engineer Eugen Wüster (1898–1977), therefore warned explicitly against language use as the 'norm' in terminology activities. He famously argued that 'free development' – presumably as

evidenced in examples of language use, that is, in texts – leads to 'intolerable confusion' in specialist communication (Wüster 1974: 68).[30] It was the increasing specialisation of knowledge, which had already begun in previous centuries, that provided an impetus to the development of a set of principles – *die Allgemeine Terminologielehre*[31] (published posthumously as Wüster 1985/1979) – to guide practical terminological activities in the early 1930s, that is, 'Terminography'. Wüster's aim was to use classical methods to organise concepts, understood as units of thought, into subject-based systems using logic and a limited ontology; once the concepts had been defined within the system, standardised labels, mostly linguistic – that is, terms – could be assigned, either from the existing inventory or as newly-created lexical items following certain term-formation principles.

But terms have other functions beyond the designatory or referential; they are also stylistically, operationally and even ideologically motivated (see Chapters 3 and 4), a fact to which specialised translators need to be sensitive and which may also be easily overlooked in comparisons with the choice of words in literary works. New terms, for instance, are created by scientists to write or talk about their innovative work but sometimes with an eye to popular appeal: in Chemistry, for instance, the catchy 'buckyball' as well as the apparently more scientific 'buckminsterfullerene' (the suffix -ene indicating a C,C structure) were coined to designate a new kind of carbon resembling in its 60-atom structure a hollow sphere like the architect Buckminster Fuller's geodesic domes. Terms or names, as designations of unique concepts, may also be created to mask negative connotations as part of an overall communications strategy, as happened with the Winscale nuclear-waste re-processing plant in north west England, which was renamed 'Sellafield' by British Nuclear Fuels Limited in 1981 following a nuclear accident. In an academic context, existing terms may be rejected to create distance from a concept and its association, as in Holz-Mänttäri's (1984) use of *Translatologie* ('translatology') for *Übersetzen* ('translation'), which was intended, according to Snell-Hornby (1998: 38), to distinguish the professionally oriented activity of translation from that used in foreign-language teaching. Or the point may be persuasive, to pitch an advertisement at a particular market: an innovatively-designed vacuum cleaner, for instance, is presented in an advertisement as

technically unchallenging through the use of rhythmic descriptive terms such as 'easy-empty bin', 'easy-access tools'. All these aspects are, of course, from a standardisation point of view of less interest, but the study of terms, their relations to each other (for example, polysemy, synonymy, hyponymy) and to the mapping of knowledge spaces through ontological analysis has developed a noticeably broader horizon in more recent times.

Terminology as 'theory' has, particularly in the last two decades, encompassed further perspectives such as language planning,[32] domain-specific methods, corpus-based studies, and notably the relationship of terms to knowledge and its representation, evolution, transfer, and acquisition (Sager 1994a). Since the 1990s, the increasing availability and processability of digital text in ever more languages have helped to refocus attention on texts as a source of terminological data,[33] but to date there have been few empirical studies which have examined the behaviour of terms in texts and their relationship to representations in codified collections from an ontological perspective, particularly in a bilingual context (but see Gerzymisch-Arbogast 1996; Marshman, Gariépy & Harms 2012).

As human beings we are capable of viewing the world in which we live, including the many worlds of specialist knowledge, from many perspectives, either systematically, as is the case where different disciplinary frameworks with different ontologies are concerned, or in an *ad hoc* way where a certain feature of a particular object, activity or event is foregrounded in a communication. In the first case,[34] the definition of 'water' according to the three natural sciences provides a good example: Chemistry, where the focus is on the composition of the substance; Physics, which is concerned with its physical properties such as boiling and freezing points; and Biology, where the focus is on its life-sustaining function. Such differences can be straightforwardly codified in definitions in subject-specific lexical resources, consistent with the characteristics of the relevant domain.

In the second case, in a text featuring a device which has two functions, each function may be in focus at different places in the text (see, for instance, Rogers 2007, where the dual noise-dampening and air-flow properties of an anti-snoring device are discussed). Dynamic relationships of this kind can be presented through the use of term variants, contextualising phraseology and interactions between terms, often also for cohesive purposes. LSP texts can therefore be

challenging in so far as the so-called 'world of facts' in which terms simply act as labels is rather elusive. By contrast, it is in the nature of glossaries, terminologies, dictionaries and so on, that they attempt to fix the relationship between forms and meanings. In bilingual resources, relations are fixed between forms from different languages through shared meanings. Even if the purpose of a terminology collection is descriptive rather than prescriptive as in standardisation, the result is still a fixed set of relationships. In this respect, the perspective presented in terminology resources can be compared to the view that you might get from a two-dimensional photograph: it does not matter how many times you change the angle from which you view the photograph, the perspective does not change. By contrast, the view which might be gleaned from a text can be compared to the multidimensional views which can be produced from a camcorder. A film, as conceived and executed by the camera operator, allows the viewer to move around objects thereby permitting different views and perspectives on what might be argued to be the same reality. In a text, the view of an object – material or abstract – may also be dynamically built up from many different perspectives, focusing on this or that characteristic at any one time or shifting the disciplinary framework. Just as a film may be interpreted in many ways, so may a written text, including LSP texts. The labelling of objects or a system of concepts which aims to represent some aspect of the world is, however, at least temporarily static.

The way in which texts can perspectivise and 'move around' items as they are presented and re-presented is not always immediately apparent. It is in translation that the different perspectives presented in texts often emerge as the translator's interpretive skills are deployed. A bilingual study of terms in running text may therefore serve as a source of insights not only for Translation Studies but also for relations between terms, terminologies and texts in general.

2.7 Conclusion

In this early chapter, I have tried to establish the importance of the communicative role which specialised translation and translators play in the modern world, also highlighting some of the difficulties of identifying and characterising common sub-types according to subject matter and genre. The cultural if not financial value which

is attributed to literary translation was associated with the uneven distribution of academic publications on literary and 'non-literary' translation, as a reflection of the relatively low cultural value placed on texts of nevertheless broad social value of various kinds. One of the most salient and characteristic features of LSP texts, namely terminology, was discussed in the context of the growth of knowledge, the compilation of terminologies and the relationship between codified term collections and the specialised texts which are the natural habitat of terms. Far from being simply an issue of 'knowing the terminology', specialised translation clearly involves a knowledge of generic norms, register and purpose, as well as an ability to apply such knowledge by crafting a new text, observing the norms of textuality, genre and culture in a different language. Moreover, the terminology landscape is constantly shifting, as knowledge evolves and is exchanged between cultures.

In the next chapter, the three key concepts of terms, text and translation will be discussed with a particular focus on 'borders'.

3
Borders and Borderlands

3.1 Introduction

The study of literature – or more specifically, literatures – is widely practised and accepted as an academic discipline in schools and universities across the globe. Translation as an academic discipline has a much shorter history and has struggled to gain acceptance in some scholarly circles.[1] As Kuhiwczak aptly remarked just a decade or so ago: the 'activity which has such old and noble origins has only recently been established as an academic field in a conscious way', concluding that 'its position is by no means universally acknowledged' (2003: 112). In making a case for translation, or at least literary translation, to be treated as a 'serious enterprise, not inherently less important than creative writing or literary criticism' (2003: 122), Kuhiwczak indirectly draws our attention to the even less established academic status of 'non-literary' translation. If literary translation, with its strong associations with prestigious texts of the creative imagination has suffered from what he calls a 'troubled identity', how much more so is the identity of non-literary translation 'troubled', especially as its binary opposite has itself had its academic problems? Being defined negatively is one thing; being defined negatively in relation to a less than universally accepted academic discipline is another.

The problem is further exacerbated by the difficulty of scoping the material with which LSP translation deals, as discussed in earlier chapters: if literature is the source of material for literary translation, how can we characterise the material for non-literary translation? 'Everything

M. Rogers, *Specialised Translation*

that is not literature' is not a helpful or insightful response. The subject matter of literary translations is reflected in the inclusion of literary studies in the profile of Translation Studies (Bassnett & Lefevere 1995: vii); the subject matter of specialised translation is drawn from many disciplines, all with their own special languages and disciplinary associations. In literary studies there is still – at least in some circles – a strong notion of the canon, although this evaluative category was weakened during the cultural turn of the 1980s. For specialised texts, there is simply no direct counterpart which assigns value based on an idea of quality, originality, or creativity, although the comparison of literary with 'non-literary' translation often assumes that the literary source text is indeed a work with such characteristics, as, for example, in Schulte's comments on the 'enormity of the [translator's] task: to bring the world's significant visions of thought and art within the scope of his own cultural community' (1989: 1). Given the uncertain identity and status of LSP translation, the current chapter will deal with what I have called borders and borderlands in an attempt to scope the field and to explore 'non-literary' and literary translation in a non-binary way, belying the opposition made explicit in the negative designation. Some of the uncertainties will turn out to be shared.

Three key elements of specialised or LSP translation – terms, text and translation – are explored in an attempt to do at least three things. Firstly, the aim is to approach the topic of specialised communication and its translation in a way that focuses on the concept of borders rather than binaries. Secondly, the chapter attempts to map out the material of specialised translation and its study as a 'serious enterprise', as also in later chapters from a historical perspective. And thirdly, some of the complexities of this material will be explored. In other words, the chapter aims to refute common assumptions about the so-called 'dogsbody' nature of LSP translation, including an oversimplified notion of terms and their treatment in texts, that is, in translation. But first, the concept of 'borders' itself is considered in relation to translation.

3.2 Exploring borders and translation

In the past few decades the concept of 'borderlands' has emerged as a multidisciplinary subject field in itself, with its own journal[2] and

boasting affiliations with Anthropology, Economics, Geography, History, Law, Political Science, and Sociology. The discipline now extends beyond the traditional 'hard' physical and rigid understanding of borders to virtual, social, and cultural – and flexible – borders between social groups (Newman 2003). Borders, marking out the territory of 'self' and 'other', are 'social constructions, delimited and demarcated by people' which function as both 'barriers to movement and interaction, or as an interface where meetings places and points of contact are created' (Newman 2003: 17, 22). The concept is already familiar in the literary field through the notion of 'border writers' as envisaged by the American translation scholar Edwin Gentzler (2008), who has studied the writing of authors living on the US-Mexican border. This literal inhabitation of a borderland leads, according to Gentzler, to 'creative and translation/adaptation work' which has been used 'as a subversive tool to resist colonial and neonational definitions of culture and society' (2008: 144). Notably, Gentzler argues that in these border spaces 'distinctions between the "original" and "foreign" cultures tend to disappear, for cultures tend to be both simultaneously' (2008: 145). Borderlands are the creative space which provides the backdrop to this chapter, looking at ways in which concepts key to the theory and practice of specialised translation have developed and are developing. We return to the issue of the 'original' below in relation to specialised as well as literary translation.

Zones of mutual exploration and fuzziness have become a lively metaphor for exploring the borders of a number of academic disciplines over recent decades (see, for example: Kockelmans 1979; Giri 1998; Weingart & Stehr 2000); these certainly include Translation Studies (for example, Tymoczko 2003; Schmid 2012), often referred to as an 'interdiscipline' (see, for instance, Snell-Hornby, Pöchhacker & Kaindl 1994; Snell-Hornby 2006: 69–114; Munday 2012: 22–6) or as a subject field 'at the interface of disciplines' (Duarte, Seruya & Assis Rosa 2006). A more radical and recent view is that research in Humanities, including translation and interpreting, is becoming more problem-based than discipline-based, thereby challenging traditional 'cartographies'.[3] Attempts to define the central concept of 'translation' have indeed raised many questions about its scope both in practical and theoretical terms, reaching back well over 50 years. The debate is ongoing, relating not only to the phenomenon of

'translation' but also to its disciplinary framework, as a recent special issue of *Target* (2012) on 'The known unknowns of Translation Studies' testifies:

> Translation Studies continues to produce a large number of publications dealing with the struggle of defining itself and its object, with the borderlines of both the discipline and the object, with ways of interacting with related (sub)disciplines. (Brems, Meylaerts & Doorslaer 2012: 1)

The metaphor of translation as a land bordering on many others beyond language has its roots in John McFarlane's 1953 essay (see also Chapter 1) on the 'Modes of Translation', in which he urges the 'linguist' to survey the ground of translation from many 'vantage points' and to draw on the 'guidance and advice' of his 'neighbours' in other 'fields of enquiry where there is a coherent structure of thought' (1953: 93). Some 60 years later, the list has grown from Aesthetics, Ethnography, Medicine, Philosophy, and Psychology to 'Linguistics, Text Linguistics, Discourse and Conversation Analysis, Pragmatics, Literary Theory, Anthropology, Sociology, Cultural Studies, Semiotics, History, Philosophy, Cognitive Psychology, amongst others' (Duarte, Seruya & Assis Rosa 2006: 2). This updated list extends the range to the analytical requirements of Translation Studies:

In practical terms, a broader understanding of translation which incorporates Jakobson's (1959: 233) well-known intralingual or intersemiotic translation in addition to what he calls 'translation proper', can bring greater coherence to the professional activities of intercultural communication experts reshaping material for different audiences but in the same language ('rewording'), or audio describers 'translating' visual and audio material into words ('transmutation', also referred to as 'transcreation' in the Arts). Even Jakobson's (1959: 238) own suggestion that poetry cannot be 'translated' but can only be 'creatively transposed', either interlingually or intralingually, or intersemiotically (for example, from verbal art to music or dance) raises issues about the scope of the concept of 'translation' itself. Developing audience awareness, working to fulfil a purpose, interpreting the meaning and significance of particular aspects of the source material in terms of the function and purpose of the text as a whole, making decisions within a systematic communicative

framework, adding to or omitting source-material elements in the target material: none of these competencies is unique to interlingual translation. Theoretically, a broader scoping of Translation Studies as a discipline can promise richer insights and understanding through a more generalised conceptualisation of how meaning is conveyed and texts reshaped under different socio-cultural, linguistic, and semiotic communicative conditions, and may even help to shed light on 'particular phenomena' (Tymoczko 2003: online). In other words, the potential for understanding and even explaining human communication – with translation being a 'central human activity' (ibid.) including, we might now add more explicitly, specialised translation – in a multilingual, multicultural, and multimedia world grows accordingly. An alternative view on the scope of 'translation' can be found in Delabastita's resonant claim[4] that 'the more Translation Studies is coming into its own, the more its central object – translation – gets eroded and dispersed' (cited in Brems, Meylaerts & Doorslaer 2012: 2), as well as in Bellos (2102).

On the one hand, Bellos acknowledges that '[l]ike language itself, translation has no rigidly fixed limits, and similarly fuzzy borderlines can be found in many other arts' (2012: 322); on the other hand, he considers 'Jakobson's proposal to regard switching media to be a form of translation' as a 'red herring' (2012: 324). Bellos bases his argument on the highly productive, and by implication meaningless, polysemy of the word 'translation', arguing that many 'cultural practices' (including, for instance, knitting and cooking) can be described in terms of 'before' (source materials) and 'after (something "radically different")' (ibid.). More specifically, he cites the example of a film adaptation of a novel to demonstrate that the practice of film-making 'calls on numerous skills and resources that have no connection to any of the things translators do or use' (ibid.). He has a point, of course, but are those scholars who argue for a broader understanding of 'translation' actually implying that *all* the 'skills and resources' of film-makers (including, we could add, screenwriters) and translators correspond? Surely not: rather that adaptation and interlingual translation share some characteristics, such as those mentioned above, and as indicated in recent work on adaptation. Milton (2009: 47), for example, cites 'the concepts of representation, transfer or transmission and transcreation' as legitimate aspects of a broader understanding of 'translation' proposed by translation scholars such as Lefevere[5]

and Tymoczko. This point of view originates, of course, in studies of literary translation. What I am proposing here is that specialised translators also share some of the 'skills and resources' required of literary translators, including audience and genre awareness, a knowledge of intercultural differences and how to manage them for a new audience, as well as the ability to interpret the indeterminacies characteristic of the majority of texts and to make judgments about when to introduce greater determinacy (coherence). Hence, any border between literary and specialised translation is, I would also like to suggest, fuzzier than is often assumed.

Technological and social developments in the 21st century further add to the blurring of boundaries, as new types of translation task emerge and more familiar ones develop; these include web translation (of multimedia texts), audiovisual translation (subtitling and dubbing), news translation, software interface messages (on many devices from laptops through tablets to mobile phones), and email, chat, and tweets (all of interest to security services), stretching the notion of 'text', to which we return below.

This chapter goes on to examine three concepts which are basic to this volume: term, text, and translation; it attempts to explore their boundaries. Borders are less consensual and intuitive than the 'centre' and therefore of special interest, and sometimes, rather risky places to be; some scholars even extend the metaphor to include territorial 'border wars' between disciplines (Stichweh 2001: 13730 citing Westman 1980[6]). A good example of territoriality in Translation Studies – further illustrating the battle over the ground covered by 'translation' – is provided by what Baker & Saldhana (2009: xxi) call the 'appropria[tion]' of the 'concept of translation […] as a trope through which the local concerns of the appropriating discipline may be addressed'. They cite the example of Homi Bhabha's popular concept of 'cultural translation', which has been rather defensively viewed by Trivedi[7] as 'threatening to translation studies' and as a 'usurpation' of the concept of translation as not only intercultural but also inter*lingual*.

In keeping with the fuzzy nature of many borders, particularly those which are not well 'policed', the outcome of the discussion here is indicative of multiple viewpoints rather than definitive. We start with terms, as the key vocabulary items in specialised communication, including, of course, translation.

3.3 What is a term?

The emerging academic subject field of Terminology or Terminology Studies – as noted, crucial to the study of LSP translation – has been denied 'independent status […] as a discipline' by Juan Sager, one of the pioneers in this area, although he also acknowledges its 'value as a subject in almost every contemporary teaching programme' (1990: 1). For Sager, the multidisciplinary perspective of this new area of study, which shares its basis in practice with translation, embraced at that time Linguistics, Information Science, and Computational Linguistics. Even earlier, for the Austrian originator of the General Theory of Terminology, Eugen Wüster (see Chapter 2), the evolving subject field went beyond Linguistics and Information Science to include Philosophy (logic and ontology) as well as the disciplines to which the terms belong (Wüster 1974). For Wüster, Terminology as a subject field was also therefore a *Grenzgebiet*: a 'border area'.

As emerging fields, Terminology Studies and Translation Studies can both be characterised as lacking 'precise boundaries' (Sager 1994a: 8). But this is the case for many subject fields, as demonstrated, for instance, by Temmerman's (2000) study of terminology used in the Life Sciences (see also Beaugrande 1980: 3 for 'natural language communication'). We cannot then necessarily expect a straightforward answer to the question 'what is a term?', with the term being the key concept in *Term*inology Studies. Nevertheless, professionally oriented manuals and standards need to provide guidance which is helpful in practical contexts.

The question is of both theoretical and practical consequence, reflecting the close relationship between theory and practice which characterises all 'theory clusters' in Terminology, a term chosen in Budin (2001) presumably in preference to the more clear-cut 'school' (see Laurén & Picht 1993b) and in line with a family resemblance-type approach rather than a more rigid classical system of classification. These clusters range from normative terminology (for example, Wüster), through computational terminology (including term extraction and corpus-based descriptive studies) and Socioterminology[8] (including elements of language planning) to descriptive terminology for the Social Sciences (see Riggs, Mälkiä & Budin 1997). A straightforward and pre-theoretical answer to the question would be: an item of specialist vocabulary from a special subject field.

But the question is far from straightforward as its extensive treatment in the literature indicates (for example, Fluck 1985: 47–55; Hoffmann 1985: 126–9; Sager 1990: 19–20; Filipec 1993/1976; Arntz & Picht 1995: 25–7, 37–41; Wright 1997: 14–16; Laurén, Myking & Picht 1998: 221–32; Cabré 1999: 80–90). To date no satisfactory 'theory of terms' has emerged which would distinguish terms in a principled way from words, for example, 'heavy water' from 'clear water', 'basking shark' from 'swimming shark' (examples from Kocourek 1981: 219). Indeed, the study of terms and terminologies raises a number of semiotic, cognitive, epistemological, and linguistic questions: What is the relationship between special languages and the worlds which they mediate? Is that relationship representative or constructivist? What is a concept? How is specialist knowledge conceptualised? What is a subject field or a domain? How can the linguistic boundaries of a term be identified? How can terms be distinguished from non-terms within a subject field? What is the difference between a paraphrase and a term?[9] Criteria which have been cited as being relevant to 'termhood' include conceptual, statistical, and linguistic factors, such as the coherence of the respective subject field, the patterns of distribution in selected documentation, and the potential term's consistency with any discernible system of terms.

The question about termhood is an important one for many strands of terminology research and practice; the answer is also likely to vary accordingly. For practical terminographical purposes, finding some kind of answer is important since it will affect the inventory of any codified terminology collection. For theoretical purposes, it is important to make explicit intuitions and assumptions since terms are the principal object of study in Terminology Studies. For standardisation committees, the problem is resolved in a prescriptive centring around preferred terms as designations of agreed concepts specified in definitions: the periphery is of no interest except negatively as deprecated items. The approach is systematic and comprehensive within a particular knowledge space. For technical writers, translators, and translation-oriented terminographers, the terminological landscape is much more varied, encompassing the highly specialised vocabulary of academic experts, the more practice-oriented terms of professionals, and the apparently jargonised language of hobbyists, eventually shading off into lay use, where in at least one respect, the 'folk' use of terms may present more interesting translation problems

than those of expert use.[10] We can also distinguish here a more *ad hoc* way of working according to immediate need in a particular text. For companies, the view may be even wider, as noted in a 2012 publication (a *Terminology Starter Guide*)[11] from TerminOrgs (Terminology for Large Organizations), a 'consortium of terminologists and other communications professionals who promote terminology management as an essential communications strategy in large organizations' (2012: 7). The authors note that while the traditional view is that 'terms […] convey special meanings as opposed to "words" that convey general meanings', in commercial environments 'any word or expression that is deemed to be important for the company's business and communications qualifies as a "term" […] regardless of whether its meaning is "special" or not' (ibid.).

For computational terminologists interested in the automatic extraction of terms from running text, formal characteristics such as syntagmatic patterns and statistical distributions are two well-known criteria for identifying term candidates (see, for instance, Bourigault, Jacquemin & L'Homme 2001). Underlying these processes are still preconceptions about what a word is and what a term is. But even if the term proves theoretically elusive – as it has done – we should not forget that the word has proved similarly elusive for linguists (see, for instance, Baker 2011: 9–10). But this has not stopped Linguistics in its tracks. In fact, Lexicology as a sub-discipline of Linguistics showed some signs of a resurgence around the millennium (see Cruse, Hundsnurscher, Job & Lutzeier 2002).

Terminology, as Lexicology, is concerned with the structuring of words and vocabularies, but its more restricted subject matter is the specialised words (or terms) and vocabularies (or terminologies) of special languages, problems of delineation notwithstanding. Indeed, a number of authors have emphasised the shared characteristics of terms and words in relation to common systems of morphology, syntax, and semantics (for example, Wüster 1974: 68; Cabré 1998/9; Sager 1998/9; Rogers 2004a;), but term and word cannot be considered as parallel in special languages and general language, that is, as *Fachwort* and *Wort* respectively, since a term may consist of more than one word, for example, 'graceful degradation' in military and computing use. To complicate things further, the term 'term' is also ambiguous: it can refer to the form (*signifiant* or *Bennenung*) or to the sign as a whole (*signe* or *Terminus*). Looking to the content side

(*signifié* or *Begriff*), another possibility to distinguish between terms and words can be found in their referential or denotative function as lexical units, since extra-linguistic knowledge plays an essential role in defining meanings for terms. Whether this is a sufficient criterion to distinguish terms from 'words' has been hotly debated (see for instance, Zawada & Swanepoel 1994: 270, 273), as is the theoretical framework within which the question may be asked and answered. The cognitivist approach of Zawada & Swanepoel (1994) and Temmerman (2000), critical of what they perceive as the false assumption of a reality independent of mind and language in Wüster's concept-based approach, has shown that terms in two scientific domains (Mineralogy and the much broader Life Sciences) parcel up and present particular views of phenomena in the world according to subjective but not necessarily *ad hoc* or random criteria. Similar points have been made in connection with specialised translation (Kohn 1990). Some researchers have argued for an analysis which treats terminology as part of Linguistics (Kageura 1995; Cabré 1998/9); others have focused on concepts in the tradition of the terminology pioneers but extending and enriching the debate from new philosophical perspectives (Desmet & Boutayeb 1994; Sager 1998/1999). There are then many approaches to the study of terminology, from the objectivist to the constructivist to the linguistic. Attempts to distinguish terms from words, where they are even made, vary accordingly.

Within the concept-based framework, the notions of 'precision' (for example, Picht & Draskau 1985: 97) and context-independence (for example, Felber 1984: 108) have been cited as distinguishing characteristics of terms, whereas linguistically based analyses have tended to be more open-ended, allowing for functional and formal variation, subjectivity and indeterminism, often empirically based on examples of language use, as is common in lexicological studies (for an early example, see Kocourek 1981). However, even those scholars who advocate a linguistic approach may still speak of 'concepts' (albeit in a more multifaceted and less deterministic way for example, Cabré 1998/1999), and those scholars who can be seen as a continuation of the Wüster/Felber tradition no longer claim complete context-independence for terms. Alternatives to concepts as mental representations of the world or some kind of decontextualised 'unit of knowledge' have been proposed, notably in

sociocognitive Terminology. 'Categories' – units of understanding – are for Temmerman (2000) prototypical structures which are the outcome of semasiological analysis, deriving meaning from patterns of use. We can compare this to the onomasiological approach of identifying concepts, the result of mental classification and ordering procedures, although in practice also often derived from texts (see, for instance, Nuopponen 1993; Condamines 2002). In the sociocognitive approach, meanings are said to be created in texts; in the onomasiological approach, they are found. But this alternative perspective on term/concept relations still does not carry us forward in our search for a definition of the term: it is assumed that we know what a term is (see, for example, Temmerman 2000: 232).

Variations in the possible forms of terms in different languages increase the difficulties of distinguishing terms from words, although clear differences may be implied (see, for instance, Picht & Laurén 2002: 43, 44). In the Germanic languages, for instance, terms tend to be more 'packed' than in, say, Romance languages, where the semantic relationships between parts of a term may be more explicitly represented through the use of prepositions (see Table 3.1).

The structure of one language's paraphrase or pre-term, for example, 'detection of cracks by dye penetrant method' as opposed to 'dye-penetrant crack detection' (examples from Sager 1997: 37) may be the structure of another language's term (see also Pecman 2012 relating to rhetorical function, and 'circumlocution', both discussed in Chapter 5).

Nonetheless, even if the task is problematic, distinguishing between what from another perspective could be called pre-terms and terms within a particular language is an exercise which is well motivated from a standardising point of view, since pre-terms tend to

Table 3.1 Language-typological differences in term formation

English	**German**	**French**
'idle speed valve'	*Leerlauf-Ventil*	*électrovanne de commande de démarrage à froid*
'cold start valve'	*Kaltstart-Ventil*	*électrovanne de commande de régime de ralenti*

be characterised by instability (Grinev 1994). The expression *pre*-term suggests primarily a diachronic perspective, but paraphrases or circumlocutions may also have a functional explanation when viewed from a synchronic textual perspective.

Shifts in the mode of expression – or, more negatively, 'inconsistency' – may be motivated by a number of considerations which are the result of textual structures. These may have to do with aspects of cohesion (formal links) within the text or with aspects of coherence for a given readership (prior knowledge) outside the text. In a scientific text written for the educated layperson, for example, compound terms, as fully lexicalised concepts, may only appear later in the text, after they have been linguistically and conceptually constructed. Halliday's well-known analysis of the progression of a text on the fracturing of glass in *Scientific American*[12] describes the textual ancestry of the compound term 'glass fracture growth rate' by pointing out the gradual shift from the verbal to the nominal (for example, 'cracks' to 'crack'; 'grow' to 'growth'; 'slow' to 'rate') as the text progresses (1992: 70–71):

> how glass cracks
> the stress needed to crack glass
> as a crack grows
> the crack has advanced
> will make slow cracks grow
> the rate at which cracks grow
> the rate of crack growth
> we can decrease the crack growth rate
> glass fracture growth rate

The terminographer faced with textual evidence of this kind is keen to establish whether phrases such as 'rate of crack growth' and 'crack growth rate' (a synonym of 'fracture growth rate'?) can be considered as terms, that is, whether they can be considered as candidates for entry into a specialised dictionary or termbase. The translator on the other hand has to decide whether to reproduce a similar chain in the target text. Whatever practical decision may eventually be made, the textual history of the expression is not due to the carelessness of an inexperienced writer or 'inconsistency', in fact rather the opposite: it is due to the skill of a writer with a particular audience

in mind as a way of introducing new material. The conceptual and linguistic development of terms (in the broader sense of *signe*) in the construction of texts or particular genres is a topic which should certainly be part of any communicatively based study of terms, as well as of term-concept relations.

In other text genres the reverse pattern of variation may be observed, in which a multiword term is reduced or elided as the text progresses (for examples see 'clipping' and elision below) to avoid tedious repetition and overspecification (see also Chapter 4.3.2), as well as relying on the reader's background knowledge and textual skill in establishing co-reference relations. All these examples show that the use of terms in text is – for functional reasons – not a clear-cut issue, thereby posing challenges for codification and also for translation.

Such problems notwithstanding, it is still important from the point of view of practice to draw word-term distinctions in order to identify terms as candidates for terminology collections which have been conceived for a particular purpose and user group. Decisions of this kind involve a number of factors (see also Daille 2005), including:

- special-language/general-language boundaries, for example, 'lecturer', a general designation for a teacher in a college or university *versus* a job grade in the British university system, relative to 'senior lecturer', 'reader' and 'professor';
- degree of stability, for example, 'exhaust catalytic converter' *versus* 'catalytic exhaust converter';
- in-text variation or 'clipping', for example, 'Hoover automatic washing machine' / 'Hoover washing machine' / 'automatic washing machine' / 'washing machine' / 'Hoover machine' / 'machine'; also known as 'reduction';
- elliptical noun phrases in which a head noun is not always explicit in the modifier-head or head-modifier forms, for example, '[Company name] produces several types of Catalytic Converter: oxidising – three way – and three-way/oxidising, in pellet and monolith substrate configurations'; the three multiword terms here are: 'oxidising catalytic converter', 'three way catalytic converter' and 'three-way/oxidising catalytic converter';
- syntagmatic boundaries, for example, 'closed loop three way catalyst' *versus* 'closed loop three way catalyst system';

- degree of specialisation, for example, 'uniform resource locator' *versus* 'URL' *versus* 'website address';
- time frame, for example, 'rates' *versus* 'poll tax' *versus* 'council tax' in local government taxation in England and Wales;
- domain classification, for example, 'nitrogen oxide', 'NOx' and 'hydrocarbons': catalytic converter technology as a sub-domain of Automotive Engineering *versus* Inorganic and Organic Chemistry;
- orthographic variation, for example, 'three-way catalytic converter' *versus* 'three way catalytic converter' *versus* '3-way catalytic converter'[13];
- geographical (also in many cases orthographic) variation, for example, 'catalytic converter' *versus* 'catalytic convertor'; 'boot' *versus* 'trunk'.

Factors such as these must be weighed and interpreted by terminographers in a pragmatic and functionally oriented way: Is T a term of domain D which is relevant to user group U for the purpose P? But answers to these questions often offer only a partial solution since phenomena such as general/special-language boundaries, term boundaries, term stability, and compound clipping or ellipsis stem from the way in which terms and words are used in texts: such variation is not primarily dependent on time, space, or situation, but on the way in which terms perform different functions as items contributing to the nature of a text, for example, through variable patterns of lexical cohesion in source and target texts (see Rogers 2007). In neither, of course, can human serendipity in the writing task be ruled out.

The lack of explicit and operable criteria for distinguishing between words and terms has been highlighted by moves to automate the identification of terms in text, often known as term extraction. Since the identification of terms in documentation was initially a 'manual' task (see for example Picht & Draskau 1985; Cole 1987), human experience, knowledge, and intuition solved problems – often related to issues of clipping, syntagmatic boundaries, and domain classification – in ways which remained largely unarticulated. Machine processing, as part of an overall terminology management strategy, has focused attention on the statistical and formal characteristics of terms (see Ahmad & Rogers 2001 for a summary of early work in this field) as opposed to words. The principal guidelines can be summarised as follows:

- terms are typically nouns or nominal phrases, with a few adjectives, adverbs, and verbs (see also Stolze 1999: 93);
- the terminological unit, as opposed to the lexical unit, is typically but not exclusively a compound (noun), either a single-word compound or a multiword compound depending on language-typological factors; phrasal groups are more common in some languages;
- the form does not occur in the general language – it is a neologism (for example, 'labellum' in Botany);
- the form occurs in the general language,[14] that is, it does 'double duty' (Sager 1990: 19), but with a different denotation – it has been 'resemanticised' or 'terminologised', often through metaphorical extension (for example, 'platform' in Information Technology as opposed to the railway station); different grammatical and semantic patterns may support general-language/special-language polysemic differences including the absence/presence of plurals (for example, 'music'/Ø, 'music'/'musics'), compounding possibilities (for example, 'bus driver': 'school bus driver' *versus* 'i2c bus driver'), modification possibilities (for example, 'occasional student': 'very occasional student' is acceptable in general language but not in the special language of UK Higher Education); restricted conjugation (for example, third person only); restricted semantic selection restrictions (for example, in the English legal system a solicitor may 'brief' a barrister, but not *vice versa*);
- terms are relatively more frequent in special-language texts in relation to closed-class words such as prepositions, articles, determiners, modal verbs, and so on, than open-class words in general-language texts are; that is, special-language texts, especially expert-to-expert texts, tend to be lexically denser (see also footnote 18);
- terms may include punctuation marks and numbers (for example, '3-(4-carboxybenzyl)-2-chloro-5-(1,2-dimethoxyethyl)terephthalic acid');
- terms may be substituted by alternative designations in some domains (for example, by formulae in Chemistry and by symbols in Physics).

This list of characteristics mixes many different types of criteria – distribution across word classes, morphological patterns, grammatical

and collocational behaviour, statistical behaviour, and graphetic patterns – and therefore cannot be described in any way as coherent. In fact, most of the criteria listed indicate tendencies or preferences rather than absolute differences. Even where there seems to be an absolute difference, the criterion only applies to subsets of terms in certain domains. Seen from a language-engineering point of view, as for instance in Condamines (1995), the combination of any of these criteria, which is oddly described there as 'deviance', is perfectly legitimate, but offers no elegant solution.

Boundaries between linguistic designations (terms) and non-linguistic designations are also fuzzy and hard to draw clearly, although the designation of symbols and formulae as 'terms' in themselves – as suggested in the TerminOrgs *Terminology Starter Guide* (2012: 11) – seems to be a step too far. Whilst symbols and formulae do not exhibit the full range of the normal semantic functions of nouns such as connotation (Gotti 2003: 27), they do have a formal nominal character in so far as they slot into textual positions normally occupied by nouns and can be verbalised, that is, have a phonetic form. Neither of these characteristics applies to other means of representation such as photographs, paintings, drawings, graphs, and so on. Formulae such as H_2SO_4 ('sulphuric acid') also share similarities with well-motivated terms in so far as they transparently indicate in a highly specific way the characteristics of what is being represented, although symbols such as '*h*' for 'Planck's Constant' are non-transparent in this sense. But as *quasi*-nouns, both formulae and symbols lack grammatical categories such as case, gender, and number. While in this respect they can be considered outside the linguistic system, from a *textual* perspective, they enter into one aspect of cohesion through sense relations such as synonymy, for example, HCl and 'hydrogen chloride', but not another, namely compound reduction. Compare, for instance, the behaviour of compound terms and formulae in texts: terms can act as textual synonyms through clipping, where the generic head of the nominal compound is co-referential with the preceding full compound: 'sliding bearings' → 'bearings'; 'rolling bearings' → 'bearings'. Formulae cannot be clipped in the same textually motivated way: 'HCl' and 'NaCl' cannot become 'Cl' in subsequent mentions and retain the function of synonyms.

The holy grail of defining the term in a coherent framework remains elusive and perhaps illusory. But empirical studies of text,

where terms emerge, change and disappear both diachronically and synchronically, offer a more promising route for textual activities such as translation than the comparative study of decontextualised lexemes. So whilst literary translators sometimes face problems posed by a creative or non-conventional use of words and phrases, specialised translators also encounter challenges at the lexical level through neology (see Chapter 5), instability/dynamism (depending on your perspective), synonymy and polysemy as well as ontological issues related to knowledge structures, and various types of lexical variation related to textuality.

3.4 What is a text?

Text is what all translators translate. They do not translate individual words or phrases in isolation (see also Neubert 1980; Baker 2011: 122). Text is pervasive in our everyday and professional lives and there are many definitions of it, as many authors have pointed out (see, for instance, Göpferich 1998a). Similar comments apply to 'discourse', with 'discourse analysis' very broadly understood as the study of 'language beyond the level of the sentence' (Hatim 2009: 88), reflecting the shift in 1970s Linguistics from the sentence-focused grammar of previous decades.[15] The distinctions are, however, often blurred. Baker, for instance, structures her translation coursebook (2011) to include coherence under the heading of 'pragmatic equivalence' and cohesion under 'textual equivalence' whereas for other authors such as Beaugrande & Dressler (1981) and Neubert & Shreve (1992), both are aspects of *text*uality. Whilst most scholars acknowledge a considerable overlap between 'text' and 'discourse' (for example, Crystal 2003: 461–2), 'text analysis' can be understood as a linguistically oriented analysis and 'discourse analysis' as pragmatically oriented, although, as Hatim (2009) points out, similar distinctions have also been made *within* discourse analysis. The use of the designation 'text' should not in the current volume be taken to exclude certain pragmatic issues, principally that of coherence, which go beyond the textually explicit.

Just as we are able in some cases to distinguish intuitively between words and terms, many authors have pointed out that we are normally able to judge whether a particular stretch of language is a text or not, although areas of uncertainty have long been acknowledged (for example, Halliday & Hasan 1976: 1). Yet fixing this intuition in a

set of criteria is challenging in a number of respects, not least because certain aspects of a text are constructed in the interaction between what is explicit in the text and readers' or listeners' knowledge and expectations. Hence, Halliday & Hasan (1989: 10) propose a rather open-ended functional solution (see also Göpferich 1998a: 61):

> What do we mean by text? We can define text, in the simplest way perhaps, by saying that it is language that is functional. By functional, we simply mean that language is doing some job in some context, as opposed to isolated words or sentences that I might put on the blackboard. […] So any instance of living language that is playing some part in a context of situation, we shall call a text.

This proposal embraces LSP texts of any length from a one-word notice such as *Exit* above a door in the auditorium of a cinema (in which case the translator does translate a single word but in a highly situated and functional way), through a ten-volume set of manuals on constructing a nuclear power station, to literary texts, including poems. But in itself the proposal leaves open more detailed questions about the qualities which distinguish texts from non-texts. Definitions such as that used by Boase-Beier (2011: 13, citing Wales' 2001 *Dictionary of Stylistics*) crucially omit the functional perspective and include extracts as texts in themselves for purposes of study: 'a stretch of writing or speech, not necessarily complete, which is the object of observation or analysis'. For translation purposes, however, the issue of a 'whole-text approach' is crucial, as decisions are not optimally taken in isolation, that is, phrase by phrase, or even sentence by sentence (see, for instance, Zhong & Li's [2004] process-oriented analysis of translation as an exercise in the reconstruction of textual coherence), whether literary or specialised. Any non-functional notion of text is further problematised by modern means of specialised communication and certain literary genres.

Multimodality, that is, the combination for the user of two or more semiotic systems in one text, became an increasingly popular topic during the first decade of the 21st century among communication specialists, notably in education and in translation. Kress & van Leeuwen's work on changing concepts of literacy is a good example in the educational field (see, for instance, Kress & van Leeuwen 2001). In translation, Nord (1991: 15) had drawn attention a decade earlier to

text as 'a communicative action which can be realized by a combination of verbal and non-verbal means', but the real surge of interest came with the rise in publications concerned with audiovisual texts and their translation (see, for instance, Remael 2001 for an early example) and with the translation of written multimodal texts such as comics and graphic novels (Kaindl 1999; Zanettin 2008). However, in LSP studies, an interest in the interdependence of verbal and non-verbal features such as diagrams, photographs, figures, tables, layout, and typography pre-dates much of this work. Early examples can be found in von Hahn (1983: 124) and more extensively in Kalverkämper (1993) on the interaction of verbal and non-verbal elements in specialised texts. The role of non-verbal signs is also emphasised in Schmitt's definition of text, which he describes as 'ein thematisch und/oder funktional orientierter, kohärenter Komplex aus verbalen und/oder non-verbalen Zeichen'[16] which, as a self-contained unit in terms of content and function, fulfils a recognisable function for a specified readership (1998a: 147). The textual relationship between verbal text and graphics is highlighted by Schmitt as an important aspect of coherence in LSP texts such as manuals: inconsistency between the terms used in the verbal text and in the graphics is named as one of the typical sources of textual 'defects' of which LSP translators need to be aware.

Indeed, in its intersection with other semiotic sign systems – as, for instance, outlined in Wüster's extensive sign typology (1985/1979: 142–3) – terminology has a particular role to play in so far as the concepts of specialised knowledge may also be represented by a range of non-verbal signs (*Bezeichnungen* or 'designations') including diagrams and illustrations,[17] as indicated in the earlier discussion of terms (see Laurén, Myking & Picht 1998: 198). It has even been argued that it is the terms (the linguistic signs) that bestow a degree of specialisation on graphics, either in the surrounding text or as labels (Kalverkämper 1993). While the introduction of images of objects such as diagrams, illustrations, and drawings into specialised texts can be dated to the Renaissance according to Kalverkämper (1993), in the late 20th century the concept of text as a complex whole woven from semiotic threads (see Graddol 1994) migrated to related disciplines to encompass film and the performing arts, such as dance.

In these days of multimedia technology, the commonalities across disciplines are, however, not only of epistemological interest, they

are also relevant to the daily practice of translators and technical writers. As Nord (1991: 108–11) has pointed out with respect to translation, sign systems may not always be interchangeable in a cross-cultural context: there may be a need to switch between non-verbal and verbal elements, depending on the purpose of the translation and the target culture, as Kussmaul's widely cited example of the 'translation' of washing machine installation instructions into a series of diagrams for a barely literate target readership indicates (1995: 75).

The idea of text as a combination of many semiotic threads – linguistic and non-linguistic – which are bound together in different ways to create a final artefact, can be related to its etymology: *texere*, Latin, 'to weave'. Different weaving skills and types of thread produce more or less densely woven cloths of differing patterns and qualities, suitable for different purposes. It is usually the case that spoken texts are less tightly structured than written texts. But some written texts may be loosely woven, whereas their spoken counterparts are in some ways more closely woven. This is the case, for instance, for the oral reconstruction of notes taken by modern-day consecutive interpreters, and historically for early Sumerian texts which had to be orally elaborated (Vermeer 1992a: 55). In the first case, the written text is sparse because of time constraints; in the second case, we can assume that the physical nature of writing materials played a role.

In the fabric of text, the lexical threads – lexical items which are linked in some way – play an important role in marking the character of the text and in establishing links which distinguish texts from, say, a series of sentences: lexical links are one of most important ways of establishing cohesion in a text. In special-language texts, which, as noted in Chapter 1, are lexically more dense than general-language texts (see Sager, Dungworth & McDonald 1980: 238–9; Hoffmann 1985: 136–40; and Stubbs 1996: 74 for 'fiction' *versus* 'non-fiction'),[18] terms therefore play a key part in contributing to the quality of being a text, to 'texture' (Halliday & Hasan 1976) or 'textuality' (Beaugrande & Dressler 1981). Since terms themselves are a condensed and economical way of referring to complex processes, sequences of events, states, activities, objects, and so on (see Schmitt 1999: 302–3), special-language texts, at least those of certain expert-to-expert genres belonging to Byrne's 'scientific' texts, can be described as doubly dense. Issues of coherence – matching

the textual and the reader's worlds – are of particular importance to the texture or textuality of texts which are created for purposes of specialised communication, and terms contribute significantly to the content and therefore to the coherence of specialised texts, building up the textual world which is presented to the reader for his or her interpretation, whether the text in question is a translation or a source text. In a distinctly post-modernist spirit, Schmitt (1999: 384–5) goes so far as to suggest that there is no such thing as *one* source text,[19] arguing instead that the possibility of multiple interpretations by different readers of some if not all LSP texts underlines the fact that specialised translators are often faced with difficult decisions resulting from textual features such as a lack of determinacy and the mention of culturally specific items in particular (see also Chapter 2). In the latter case, Schmitt (1986) gives the example of how the German DIN (Deutsches Institut für Normung) and the British standards for aluminium alloy vary: not the names but the actual composition of the alloy, meaning that the context may sometimes require further elaboration if the composition of the alloy is crucial to the understanding of the text.

As arguably the most salient feature of special-language texts (Hoffmann 1985: 21), terminology plays an important role in their relative acceptability. Texts may well be rejected by experts because of ideological commitments signalled by the set of terms chosen: in discussions of second-language 'learning' or 'acquisition', the term set 'behaviourism'/'stimulus'/'interference' represents a very different position from that signalled by 'mentalism'/'evidence'/' development'. Or a text may be rejected by laypersons as incomprehensible or jargonised because the terminology is unfamiliar to them, for example, 'on-going talk-in-interaction' for 'conversation'. Laypersons are, of course, not amongst the intended readership for many specialised texts, but cases in which textual communication fails often result from a misjudgement of the level of knowledge which potential readers bring to the text (see also Schmitt 1998b in the context of technical writing). Since LSP texts deal with knowledge which usually needs to be formally acquired, adjusting the way in which the meanings are expressed in a text to the intended readership's knowledge and expectations is likely to be crucial to successful communication. This adjustment includes the cognitive aspects of explicitation and implicitation even in sci-tech translation

(Krüger 2013) as well as the appropriate choice of terminology and strategies for introducing terms.

The lexicalised metaphor of text as woven fabric matches our intuitions about a prototypical text, understood as a stretch of running text created for conventionalised purposes which consists of a nested series of words, phrases, clauses, sentences, paragraphs (and possibly sections, chapters, volumes), with formal as well as semantic links between them. In the literary field, the novel or the short story spring to mind. Establishing prototypes in specialised communication is arguably more problematic. The notion of prototype has been applied by Snell-Hornby (1988: 27–31) to so-called text types covering both literary and non-literary texts. Following Neubert, she calls this a 'prototypology', which is characterised by 'blends and blurred edges'. She uses a cline in preference to a typology based on the objectivism of classical categorisation which assigns tokens to clearly differentiated types. But even the cline of 'basic text types' presented (1988: 32), namely: Bible – Stage/Film – Lyric Poetry – Modern Literature – Newspaper/General information texts – Advertising literature – Legal literature – Economic Literature – Medicine – Science/Tech., presupposes some kind of linear relationship in which resemblances between non-adjacent types then become problematic. So, for instance, advertising may be as lexically innovative as literary texts, and legal and medical terminology tend for different reasons to be more conservative than say, economic terminology.

But what of other documents? Can an invoice, which consists of certain formulaic strings and phrases such as the company name and address, an order or reference number, a list of items ordered or services rendered, a breakdown of price, conditions and methods of payment, be considered a closely woven 'text'? Or a parts list? Or a sales catalogue full of illustrations with minimal verbal text?

One way of attempting an answer to these questions is to view such documents as part of the knowledge store of organisations, alongside more prototypical texts such as memos, letters, reports, sales and marketing literature, as well as website content (increasingly including blogs) and the ubiquitous email, and more recently, tweets. Many of these texts function as intertexts: imagine a scenario in which a customer has ordered a part from a sales catalogue and is sent an invoice for what appears to be another part but is actually the same part called by another name in the parts list. In such a case,

the intertextual chain would comprise: sales catalogue / customer's order / parts list / invoice / customer's complaint letter / internal memo / company letter of apology and clarification. Seen from this perspective, apparently peripheral members of the class 'text' assume equal importance in the communication chain, exhibiting both formal links, for example, through the terms used, and shared content. Many organisations today are therefore concerned to co-ordinate their textual workflow by digital content management (see, for instance, Budin 2001, 2008). One aim is to facilitate access to the organisation's knowledge store, as archived in its documents. In multilingual environments, translations are an important part of that knowledge store, and content management systems, which facilitate the re-use of chunks of text, chime well with the increasing use of translation memory systems. Retrieval of documents or sets of related documents by authorised users, including technical authors and translators, is effected by the use of so-called metadata which are used to classify each document according to selected criteria such as authorship, date of origination, updates, content as indicated by keywords (that is, terms), document type, and so on.

It is certainly the case that documents such as invoices, parts lists, and sales catalogues do not qualify as 'best' examples of texts according to standards of textuality such as lexical and grammatical cohesion, but they exhibit coherence of topic, perform a function in a particular social situation, are acceptable to their receivers as legitimate communications as intended by their producers, obey certain socially sanctioned conventions and laws (for example, conditions of payment; advertising regulations), and enjoy relations with other texts. Text-internally, an invoice has its own conventionalised structure, although it lacks obvious divisions such as paragraphs and full sentences with finite verbs. A parts list consists of terms often accompanied by part numbers and/or illustrations, with little or no contextualising syntax. But it provides data for both internal and external authors of other texts, is a key source not only of terminology, but also, through any classification systems in the part numbers, of knowledge about the domain. And parts lists have to be translated for international markets. It is also the case, however, that such texts – once issues of synonymy have been resolved – are likely to be formulaic and therefore to present fewer translation dilemmas, particularly as repeat work for the translator. It is then perhaps the

absence of some of the more complex, text-oriented characteristics of textuality such as cohesion that facilitates the translator's task by reducing the scope for interpretation within a fairly rigid set of genre conventions.

A different example of the concept 'text' with which translators must deal in the modern professional world is the cell-based text, shaped according to the software – that is, a spreadsheet – in cells which are the junction point between columns and rows. One German company, for example, circulates internally but globally to all national marketing departments what is called an Annual Communication Plan which is produced in a spreadsheet program. The document summarises in columns (product number, product name, slogan, marketing objective, and so on) and rows (each product) all the information associated with each product. This 'text', which combines numerical data, proper nouns, highly condensed marketing slogans, as well as short descriptive texts, has to be translated into English.[20] There are clearly many ways of 'reading' such a document, according to need and interest, reflecting the different connections which can be made between the cells, usually on a vertical or horizontal basis. From a communicative-functional point of view, these documents are indeed a kind of text, albeit non-linear and certainly on the periphery of any prototypology. However, professional translators are unlikely to decline work in this form on the basis that they are not dealing with a 'proper' text. An anecdote from a translation class I once taught can perhaps illustrate the strong tendency towards a prototypical understanding of text classification based on experience and perspective: an exchange student from a German university studying English literature once asked me after a few weeks spent translating museum websites, recipes, and hotel brochures when we would be translating some 'proper' (*richtige*) texts, by which she clearly meant literary texts/text extracts.

Commenting on texts of a more marginal kind, Sager (1990: 108) has argued that the reader's prior understanding of the purpose of the text facilitates economy of expression, that is, readers' expectations help to compensate for the lack of explicitness. These texts are also read differently from more prototypical texts, which, at least in the paper medium, tend to be read in a linear way. Many texts are, however, now read in the electronic medium. The arrival

of hypertext in electronically stored texts opened up a new area of research in Text Linguistics, since previous analyses of cohesion and coherence presupposed linear processing as opposed to user-led navigation. Authors would have made the same assumption. The *technical* issues of translation of the 'content' of digital text which is marked-up with formatting codes for distribution through the Internet, can now be handled by dedicated commercially available software. But it is clear that the confluence of previously disparate material on company and other websites (marketing, sales, customer support, technical reports, information on the organisation and personnel, blogs by senior staff, and so on) requires considerable co-ordination (see Hofmann & Mehnert 2000: 60), especially of the terminology used. It also raises issues concerning text boundaries: is a website a 'text'? Or is each part of the website accessed through tabs such as 'Home', 'About us', and so on a text? And how are we to classify such texts, howsoever defined? Each website is likely to exhibit a variety of functions with considerable variation between different parts of the site.

The dialogic interactions which are a feature of much software are a good example of hypertext which is often translated. Online help system files account for a large part of localisation projects (Esselink 1998: 71), where the situation, as an aspect of textuality, is the computer screen; the text as presented to the user/reader is electronically created, and in its physical on-screen appearance, ephemeral. The 'text' which is read by the user is constructed from a set of potential texts, according to the particular path which the user chooses to follow and to the items which are selected or requested for help. So each 'reading' of the text will be different, or arguably, each text will be different, if defined as the one constructed by the user. This kind of 'virtual text' requires not only a degree of context-sensitivity in its re-use but also a high awareness of consistency. In the first case, a message which may appear in many sections of the software needs to be appropriate to the particular section of the application in which the user is working. In the second case, the particular combination of choices made by the user may highlight inconsistencies in the use of terms. For instance, if 'button' is used to refer to the icon on a toolbar, then it cannot also be used for the clickable options such as SAVE OK CANCEL which appear in many dialog boxes, particularly if both appear together in the same

screen. One outcome of the leveraging of text 'chunks' may be a weakening of traditional concepts of cohesion (see, for instance, Rogers 2011 for translation memory).

A contemporary example of a product which requires interactive messages to be translated, or rather localised, is the video game (see Bernal-Merino 2014). Here the text is part of a multimedia environment in which written text functions alongside spoken text, non-verbal sounds and images (Schröder 1993b). The player operates within this environment to create his or her own story or multimedia 'text' (see also Graddol 1994). Such instances of interactively constructed text focus our attention on the changing nature of the translator's textual environment: in many cases, text is no longer what accompanies the product, it is *part* of the product and possibly a significant part (Hofmann & Mehnert 2000: 59). Texts are therefore embedded in environments where they not only interact with visual and audial signs, but they may also control them. The control element handed to the user distinguishes these newer translation environments from more established audiovisual tasks such as subtitling or voice-over translation.

Developments in the more collaborative and dynamic 'Web 2.0' model of the 21st century, in which data are 'shared by users in a more fluid and democratic way than previously possible thanks to online content management systems, social networking sites and blogs' (Byrne 2012: 17), have also led to different approaches to translation, notably crowdsourcing (Hopkins 2011; European Commission 2012). This is a model of translation, described by O'Hagan (2009: 94) as 'solicited community translation', that is, a type of user-generated translation, which is actively pursued by some organisations: the crowdsourced translations of Facebook, which have been completed using Facebook's customised software, are a case in point.[21] Such translations undermine traditional approaches to textual features such as authorship and concepts such as versions understood as clear stages in the evolution of a document, as well as calling into question traditional social categories such as professional and amateur, and raising social issues such as empowerment.

The range of texts which the modern-day specialised translator can encounter is therefore potentially very broad, ranging from established genres including both verbal and non-verbal content, through

spreadsheets to computer software and websites (localisation), as well as video games. Many of these genres and media pose significant challenges not only for the translator, but also for their analysis as 'texts'. The very question: what is a text? implies that there are stretches of language which are highly marginal. But to speak of a 'non-text' would be nonsensical unless the term were understood as a passage of language which is *intended* to be a text but which fails in some respect. There is no 'other' class of items here as there is in the case of terms (that is, words). No-one – except perhaps a text linguist wanting to prove a point – simply strings a number of words, clauses, or sentences together without a purpose in mind. In practice, the reader's reaction in such a case is more likely to be one of puzzlement than outright rejection.[22] Most LSP texts, according to Schmitt (1998a: 147, 1999: 59–106) are in any case 'faulty' in some way, by which he understands less than optimal. But texts *are* indeterminate to varying degrees (see, for instance, Antia 2007 in relation to terminology): if we were to spell out every connection, every reason, every assumption, authors/speakers would be telling readers/hearers things they already knew in many cases, leading to an extremely tedious communication without a clear focus or narrative line. It has been suggested that indeterminacy is a characteristic of literary texts in so far as they are 'only realized in readings' (Bassnett 2014: 152). Whilst this is undoubtedly the case, it certainly does not preclude indeterminacy as a characteristic of LSP texts as well.

Nevertheless, some texts are clearly more determinate than others owing to the purpose of the communication: instructions for administering medication, for example, or contracts in law need to be as explicit as possible in order to constrain behaviour in well-defined ways. Although poorly drafted legal documents provide ample employment for lawyers, as human beings we are generally very good at trying to construct meaning in a co-operative fashion, as Grice pointed out nearly 40 years ago (Grice 1975). But for users of specialised texts such co-operativeness requires a detailed knowledge, not only of genre conventions but also of the subject matter and its terminology or terminologies, since most texts cross subject boundaries. Without that knowledge, the intended text may be a 'non-text' for some readers.

The users of texts include, of course, translators. Indeed, the concept of 'non-text' has been invoked in close connection with

translation, specifically with 'bad translations' as unintentional non-texts (see also Neubert & Shreve 1992: 120, 145):

> The nearest we get to non-text in actual life, leaving aside the works of those poets and prose writers who deliberately set out to create non-text, is probably in the speech of young children and in bad translations. (Halliday & Hasan 1976: 24)

The adult interlocutor of young children does not expect adult standards of cohesion, coherence, vocabulary, grammar, and so on and adjusts accordingly. The reader of a translation, however, may have similar expectations of a translated text as of an original text, often not even being aware of the text's provenance, especially in literary translation into English (see Venuti 1995). Bearing that in mind, the target text may even end up in a quite different form from the source text, as Kussmaul's washing machine example shows: such decisions are, he points out, part of the translator's translational competence. This brings us to our next question: what is a translation, and more specifically, what is a specialised translation?

3.5 What is translation and what is specialised (LSP) translation?

As already indicated earlier in this chapter, within Translation Studies, the word 'translation' has many different senses and may be viewed from many perspectives, reflecting product/process differences, written/spoken communication, various non-discrete types of translation activity (audiovisual translation, machine translation, web translation, news translation, specialised translation, literary translation, *belles infidèles*, scholarly translation, commercial translation, pedagogical translation, service *versus* aesthetic translation), merging into activities which many but not all would exclude such as bilingual authoring or adaptation (see Shuttleworth & Cowie 1997: 181–2 for an overview; Gambier 1992 for an early intervention; and Bastin 2009: 3 for an update on 'adaptation' as a 'set of translative interventions which result in a text that is not generally accepted as a translation but is nevertheless recognized as representing a source text'). Whilst arguing against what he calls a 'metaphorical sense' of translation, which in his view has the effect

of 'divert[ing] attention away from the richness of linguistic transfer itself', Montgomery also points out the diversity of the concept of 'translation', which 'defines a process of communication every bit as varied as writing itself' (2000: 4), resonating once more with the Cultural Studies perspective introduced by Lefevere of translation as a kind of 'rewriting', a concept which helped to counter the view of translation as a mere 'hack' job (see Bassnett 2014: 3, 30).

Writing in a professionally oriented context with an eye to the translation industry, Melby et al. (2014) reflect on the implications of a broad *versus* a narrow view of translation and the resulting implications for the assessment of translation quality. A broad view would include localisation, for example, and a narrow view would regard activities such as summarisation and transcreation as 'translation-plus'. They remain non-committal on the scope of 'translation', describing instead 'a "landscape" within which various definitions of translation can be "planted"' (Melby *et al*. 2014: 392).

The act of definition may indeed be futile if understood in the classical way as a set of necessary and sufficient features which result in clear classifications of types and sub-types. In his carefully argued consideration of the well-crafted question 'what is (not) translation?', Hermans (2013) explicitly rejects this approach, as well as a prototype model of hierarchically related more (central) and less typical (peripheral) representatives of the class 'translation', in favour of translation as a 'decentred' 'cluster concept', based on Wittgenstein's family resemblances (see also earlier in this chapter for 'theory clusters' in Terminology Studies).

The diversity of the concept of translation can be illustrated by the very names by which we refer to it, and its various instantiations can influence the way in which we conceptualise its scope and its nature. It has been pointed out by Bellos (2012: 22–3), for instance, that many different words are used in Japanese for 'translation' – 23 are cited, all of which nevertheless seem to share the head noun *yaku* – according to criteria which may be represented less systematically in other languages: a translation of a translation is a *jū yaku*, a celebrated translation a *meiyaku* and a bad translation a *dayaku* or an *akuyaku*. If we follow the etymological trail behind the English terms 'translation' and 'interpreting', *trans-* suggests a crossing over of the translator whereas *inter-* indicates assuming a position between. But even going back to the Latin fails to help: it seems that

there was no agreement amongst Roman authors on a single term for 'translate', according to Montgomery (2000: 41–2); he reports on 'a whole spectrum of verbs, such as *verto* (to turn, appropriate), *converto* (to change, transform, pervert), *transfero* (to carry over, transfer, interpret), *interpretatio* (to explain, expound upon), *explico* (to unfold, set forth, express), and *translatio* (to transport, carry across)'. In her study of early theories of literary translation (including biblical), Amos reports that various terms were used alongside 'translation' including 'make' and 'compile', with the concept of 'translation' itself being applied very loosely up to the 16th century (2001/1920: 7–9). During the Renaissance period, patriotism even reared its head in the use of 'englishing' as a synonym for 'translating', reflecting a desire to equal the cultural achievements of England's Continental neighbours (Bassnett 2014: 85). Elsewhere, relating specifically to the translation of science – which might be expected by the 21st century to be a reasonably well-scoped activity – Montgomery (2009: 9–10) sets out a number of forms of 'transmission', concluding that 'the word "translation" is itself unequal to the reality – a term like "conversion" or "transfer" might be applied to this multi-dimensional and often momentary movement of science among languages'.

What is clear is that the terminology of translation is far from clear (Bassnett 2014: 145), even in one language, English. Having reviewed the terms for translation and interpreting across a range of Indo European and non-Indo European languages, Chesterman concludes that '[t]he etymologies of terms denoting interpreting seem to display the feature of mediation more frequently than those denoting written translation' (2006: 9). Drawing on work by Stecconi, he suggests that 'three key semiotic features' can be adduced in an attempt to establish a 'universal category of translation': similarity (between source text and target text), difference (between languages) and mediation (reflecting the position of the translator 'between two sides') (2006: 4). A different view is taken by Mossop (1998), who, in a closely woven argument, proposes that what he rather obliquely calls 'sequential imitative quoting'[23] encapsulates the activity of 'Translating' (regardless of genre), thereby excluding many activities which are elsewhere considered to be examples of 'mediated intercultural communication', as Göpferich (2007) puts it.

A more genre-based view is proposed by Boase-Beier (2011), who argues that retaining the source-text relationship between

form and meaning is crucial to a successful literary translation but not to a non-literary translation which, she argues, can be better judged according to functionalist criteria. Her innovative notion of 'style' as a 'set of weak implicatures', relating what is traditionally a literary concept to the pragmatic notion of Relevance, is central to this. 'Weak implicatures' are understood as 'all those aspects of the meaning of a text which are left fairly open by the speaker' (2011: 9), the creativity of a literary text being closely associated with its open-endedness, opening up interpretive space for the reader (2011: 42). Whilst it is certainly the case that many types of LSP text need to be explicit in order to fulfil their function (as noted earlier, for example, safety-critical texts), such texts are not always well written, may contain factual errors or present equivalence problems arising from non-congruent mapping of terms and concepts in the source language and the target language. An example of the latter from technical translation is given by Schmitt (1999: 99): whilst in English there are clear equivalents for the German *weichlöten* and *hartlöten*, namely 'solder' and 'braze' respectively, there is no hyperonym in English for the generic term *löten*, meaning that the LSP translator has to make a decision about which specific alternative to choose in contexts where this is not explicit in the source text (see also Stolze 1999: 38). The LSP translator can therefore be in the converse situation to that of the literary translator, of having to close off interpretive possibilities for the reader of the target text.

The question asked in all these musings is: what do all these artefacts that we call 'translations' (or whatever) have in common? If there are 'literary' and 'non-literary translations', what features do they share to render them sub-types of 'translation'? And are binaries of this kind helpful? At the level of generality indicated above, the translation of literary and non-literary genres can easily be subsumed under one category. But definitions of translation as an activity have changed over the decades to reflect different perceptions as well as changing social and economic conditions. Even 20 years ago, the possible understandings were many, as seen in Sager's attempt to circumscribe the field from a language-engineering perspective (Sager 1994b: 120–5, 184). More recently, some authors have argued for an expansion of translation as an object of study, including, for example, Tymoczko (2003) (as noted above) and Göpferich (2007), who argues from a functionalist perspective which embraces certain

intralingual text transformations such as 'text optimizations' and 'popularizations'. Others have argued that a clear focus is necessary. In his more restricted view, Mossop (1998) focuses on what he calls 'language production tasks', some, but not all of which are 'translational'. 'Non-translational' activities, which may nevertheless be undertaken as *part* of a translation, are said to include co-producing, re-expressing ideas, repeating, copying, transcribing, and so on. This approach, that is, focusing on the activity rather than the textual artefact, is said to avoid subjective disputes about 'normative cut-off points' on some kind of cline: it can simply be stated that the translator or interpreter is engaged in 'two different activities', translating and something else (1998: 242). Writing at around the same time, Pym (1997) is also in favour of a more restrictive definition of 'translation': arguing on functional grounds connected with the range of possible solutions to communication problems, including 'non-translation' solutions, he supports Koller's insistence on 'equivalence' as a component of any translation theory, lest 'every text that has been produced from an anterior text' (1997: 77) is labelled a 'translation'. For Pym, such a distinction is necessary in order to be able to 'properly propose alternatives to translation' (1997: 78).

While a minimal requirement for a definition would appear to be that 'translation' includes reference to two texts, a source text and a target text, there are notable exceptions, as many scholars have pointed out. As the most well known of these scholars, within his descriptive approach to literary translation, Toury claims that the 'obsession with restrictive definitions [of translation] proves counterproductive'; arguing instead for an inductive approach, he controversially considers any text which is *assumed* to be a translation as a legitimate object of Translation Studies (Toury 1995: 31, 32). In some cases, assumptions are not necessary as apparently original literary works have been deliberately presented as translations, as can be seen from Toury's discussion of *Papa Hamlet*, a late-19th century German text disguising itself as a translation from the Norwegian (1995: 47–52).

Conversely, an 'original' text may actually turn out to have a source text, since translations (usually literary) have on occasion been presented or perceived as original new texts, as was the case for a number of 19th century English translations of French drama before international copyright legislation was introduced (Hale 2000).

Many more examples of literary translations passed off as original work, as well as of original literary works presented as translations, can be found in Bellos's lively account (2012: 36–9; see also Amos 2001/1920: 7 relating to the medieval period). These examples all relate to literary texts.

A rather different take on the issue of 'originals' and 'translations' can be identified in the view of translation associated broadly with the cultural turn. In this view, literary translations are rewritings and new creations in the target language and culture. In other words, they can also be regarded in some sense as 'originals' (Bassnett 2014: 153). One reason for this is, we can recall, that literary texts are said to be indeterminate, meaning that there is 'no definitive reading' (2014: 152), although this ignores the fact that LSP texts are also indeterminate to varying degrees, as discussed earlier in this chapter. But this view of the relationship between originals and translations is one of analysis by Translation Studies scholars rather than a particular presentation of a work by an author which seeks to deny the existence of an anterior text.

Whilst Holz-Mänttäri's functionalist model of *translatorisches Handeln*, which is primarily concerned with non-literary translation, does not necessarily require a source text (see Nord 1991: 27; Vermeer 1992a: 18; Göpferich 2007: 32)[24], it is hard to imagine what could be gained from actively presenting a text such as a report, a user manual, or a compliance certificate as a translation when it is not, even if the paralinguistic means to do so (such as a preface or book cover) were available. Conversely, the fact that a text is a translation is in many cases obvious: consider the information which is found on packaging and in multilingual instructions for use, as required in many jurisdictions. However, legal requirements may also have the effect of masking the status of a set of texts as translations and presenting them as originals, in order, for instance, to establish legal parity, as happens in large international organisations such as the European Union and the United Nations (Hermans 2013: 79). There may also be occasions when an author or a speaker wishes to represent an article or lecture as originally written in the language of presentation, not their L1, not because of legal requirements but rather for reasons of prestige and face.

A further issue which blurs the translation/original binary is the widespread practice through history (Bellos 2012: 176) in both

literary and Bible translation of 'retranslation' (sometimes called 'indirect translation'), that is, the reworking of existing translations, often to be re-presented as new translations, for reasons of clarification, style, or dogma, as pointed out by Bassnett (1991: 49). A fairly recent literary example is documented in Merino (2003), which is an attempt to track the 100-year history of the Spanish 'translations' of Washington Irving's 19th century collection of short stories (*Tales of the Alhambra*,[25] many of which turn out to be reworkings or adaptations of previous translations or versions, including 'outright plagiarism' and 'unlawful editorial practices' (2003: 100).

In the modern professional world, we might consider the extent to which the updating of a previously translated version of, say, a technical manual could be described as translation or as editing, since re-use or 'leveraging' is the basis of one of the most successful machine-aided translation software innovations of the 1990s, namely translation memory. Translation is then, in some cases, the integration of previously translated material with new, especially but not exclusively in specialised translation. In the case of Bible translation the social and political status of the text was the crucial factor in its repeated re-translation; in the case of contemporary technical manuals, it is technical reasons which are the main driver of regular updating of source documents. The absence of retranslation was, however, in pre-Internet days cited as a key feature of 'scientific texts' (Savory 1957: 146; Finch 1969: 4–5). A second key feature – that such LSP texts are intended for immediate consumption (Savory 1957) – still, however, holds largely true (unless it concerns texts of the scientific canon) especially in areas such as news translation.

Retranslation in an LSP context is also a well-known phenomenon through the use of 'pivot' languages, which provide an expedient solution to the coupling of source and target languages which are rare or even unknown combinations for translators. In the European Union, for example, a system of 'relay' translation – usually via English or French – is in place in all EU translation services for uncommon official language combinations such as Estonian-Greek. There is no creative or other advantage to presenting these so-called relay translations as translations from the original. What constitutes an original source text is, however, another issue.

Texts which originated before the invention of the printing press had to be manually copied, resulting in many versions and blurring

the notion of an 'original' text. Both literary and non-literary texts are clearly at issue here. In the context of literary works, Bassnett (2014: 11; see also 148–9) proposes that a clear distinction between 'something termed "original" writing and translations' only emerged in the early 17th century in the West 'linked to the spread of printing and the diffusion of the book, which prioritized "authorship"'. Writing in the rather different context of classical and medieval 'science', Montgomery notes a pre-printing prevalence for what he calls an 'indeterminacy of scribal culture' in the work of the copyists, which gave rise to a 'large and uncontrolled number of versions of any one text […] at any one time' through errors, omissions, alterations, misinterpretations, and additions (2000: 19). Worrying tendencies are also reported in the working methods of the translators of early science texts, for example, in Astronomy: translators are said to have often 'add[ed] new examples, reorganize[d] or create[d] new chapters, insert[ed] commentary, change[d] wording' (ibid.). Whilst the reasons for such changes are not reported, in the literary context translation as 'improvement' may have had ideological roots. Citing the familiar example of Edward Fitzgerald's version of *The Rubaiyat of Omar Khayyam* (1858), Lefevere (1992a: 4) quotes the translator as follows, showing his motivation to be one of cultural superiority: 'It is an amusement for me to take what Liberties I like with these Persians, who (as I think) are not Poets enough to frighten one from such excursions, and who really do want a little Art to shape them'.

By contrast, improvements to modern-day LSP texts can be well-motivated and non-ideological in cases where there are demonstrable errors or infelicities in the source text, usually restricted to informative text types (see for instance, Finch 1969: 3, 11; Newmark 1988: 204–12). Schmitt (1999: 59–106) presents a rich catalogue of errors which can occur in source texts, including unintended repetitions, incorrect measurements, discrepancies between reality and the text, and expressions which are infelicitous given the purpose of the translation (that is, assuming the unfortunate translator is briefed about this by the client or the agency). Nord even suggests a situation where poorly written operating instructions – possibly a translation in its own right – are abandoned by the translator who instead resorts to researching the instructions anew and re-writing them in the target language (1991: 27). In this case, Nord argues that no translation as such has taken place, since the new text 'is not

based on, or bound to, a given source text' (1991: 28), although she acknowledges considerable fuzziness in what could be understood by 'based on' or 'bound to'. In fact, her example illustrates the close relationship between technical translation and technical writing, a synergy also noted by Schmitt (1998b), where specialised translation – *Fachübersetzen* – is termed *Interlinguales Technical Writing* (see also Göpferich 1998c), a link which is explicitly reflected in a growing number of translator training curricula. Thinking along similar lines, Kiraly (2000: 12) points to multicultural technical writing (the production of parallel texts in different languages) and localisation (linguistic and cultural assimilation to local market needs) as examples of how the translator's area of professional expertise is shifting towards the more general notion of 'intercultural communicator'. In fact, translation is increasingly becoming just one of the services provided by global communications companies which offer a one-stop shop for document management from authoring, website creation, maintenance and updating, terminology management, software localisation, printing, publication, and translation.

The whole issue of variation between source text and target text and the relationship between them is in many respects a reprise of the free *versus* literal translation debate from a different perspective. What would not be correct, however, would be to assume with Bassnett that the translation of 'scientific documents' allows little if any variation in translation: by contrast with literary texts, she writes, scientific texts deal in facts 'which are set out and presented in unqualifiedly objective terms for the reader of SL [source language] and TL [target language] alike' (1991: 79; see also Newmark 2004 in Chapter 1).[26] It is quite possible to imagine situations in which a scientific text may be translated for a specialist or a non-specialist audience, where genre conventions may vary between source language and target language (see, for instance, Rey 2000), where discourse conventions vary, or where cultural differences apply between technical or scientific standards, meaning that corresponding adjustments may be needed in the target text.

In this section I hope to have shown that whilst there are differences in the subject matter of literary and LSP translation, there are also areas of common interest. Motivations may differ for the mode and manner of translation decisions – ideological, technological, expedient, knowledge-based, cultural – but the shifting nature of

source text-target text relations and the nature of 'originals' and 'translations' do not separate literary and specialist translation: they are part of the nature of translation as an activity.

3.6 Conclusion

Both literary and specialised translators enjoy a degree of agency in shaping a new text for a new audience. Even though their priorities and constraints may differ, both have to be versatile. Whilst authorial voice is a strong consideration for literary translators, so are issues of target-market acceptability, genre compliance and authenticity for specialised translators. As the majority of LSP texts are anonymous and/or multi-authored, considerations other than authorial voice reflecting the function of the text type, fast-changing terminologies and target-language genre conventions assume greater importance. But both literary and LSP translators deal with multimodal texts: the former, for example, in graphic novels and illustrated children's literature, the latter in many genres from instructions for use to scientific papers. Both groups of translators also need to make judgments concerning what can be culturally assumed and what is required to meet the needs of a particular audience profile. In the case of literary translators such judgments need to be balanced against the exigencies of representing the authorial voice. The explosion of genres – some peripheral in any textual prototypology – and media in LSP translation as well as the increasingly rapid development of its range of subject matter – whether technological, scientific, financial, political, or whatever – mark out significant changes to the professional scope of the modern-day specialised translator. Such differences of content and purpose notwithstanding, a binary classification of literary *versus* non-literary translation is not helpful in understanding how translation works. A shared concept of agency is perhaps more helpful in this respect, emphasising the way in which all translators make decisions based on experience, training, and consultation. The fact that some LSP translations may be ephemeral and banal is not excluded here but then neither can some of the more banal examples of literary translation be ignored. Not all literature is of the canon.

This chapter has also shown that another binary – 'originals' *versus* 'translations' – has been weakened in current thinking, not only in literary but also in LSP translation, albeit for different reasons.

In literary translation this has to do with the creative nature of the rewriting of what are often prestigious source texts. In specialised translation, the reasons are myriad, encompassing technological, legal, and genre-related issues, but also in some LSP texts, notably those concerned with science, we can think in terms of a rewriting, according to which science writing is linguistically creative (Byrne 2012: 2, 29) and 'presented anew' (Fuller 1998: 54) rather than 'reproduced' in translation.

In the next chapter I focus on one of the major features of LSP communication, its terminologies, adopting a historical perspective in order to establish a kind of pedigree for LSP translation beyond the apparently banal.

4

Terminology and Specialised Translation: A Historical Perspective

4.1 Introduction

The focus of the present chapter shifts to one of the factors which is often claimed to distinguish specialised from literary translation, namely the use of specialised vocabularies, in other words, terminology. In setting out to redefine the characteristics of literary translation, Woodsworth, for example, argues that for scientific-technical translators, the principal difficulty is *terminological* compared with the *stylistic* 'traps' of literary translation (1988: 121).

However, other translation scholars disagree. The need for literary translators to have access to 'encyclopaedic knowledge' – closely linked to terminology – is noted in a practical guide to literary translation by Landers, who argues that 'the literary translator's need for a diverse and up-to-date collection of references is sometimes overlooked' and that 'a much wider range of reference sources is an absolute necessity' (2001: 171). Bassnett (2014: 12) takes a similar view; she cites the 20th century Russian-English bilingual writer and translator Vladimir Nabokov on the translation of Pushkin's *Eugene Onegin*: the translator is said (rather impossibly in Nabokov's view) to need not only knowledge of various French, English and Russian literary works, but also of banking, Russian, European and American military ranks, berry fruits, and the English and Russian rules for pistol duels, amongst other things.

It is clear that whilst LSP texts by their nature are bound to contain terms, many literary and sacred texts also feature specialist vocabularies of various kinds[1]. Take, for example, the bestselling English

M. Rogers, *Specialised Translation*

translations of the popular 'Nordic noir' novels,[2] which deal variously with Forensic Medicine, Pathology, social services, police services and the courts. In a similar vein, Whithorn (2014) discusses the translation of mafia terms in the context of audiovisual translation as well as of European legislation. An earlier example of how 'hard words' in literature were treated in a similar way to the emerging terms of science is reported by Gotti (2003: 172): the 'more obscure [words] appearing in literary works' were included in so-called 'hard-words' dictionaries of English produced at the beginning of the 17th century; these literary words were also considered as 'inkhorn' terms (see also Chapter 5) alongside the large number of loans or assimilated loans borrowed into English.[3]

Specialised translators, as we have seen in Chapter 2, tend to specialise in particular subject fields as part of their professional competence and profile. The relative unpredictability on the other hand of literary translation with regard to the occurrence of specialist words or expressions alongside imaginative lexical innovations is something which literary translators have to deal with, as did an inexperienced student who accepted a commission to translate a novel sight unseen; it turned out to be packed with church architecture terms.

This chapter will show that the 'word' turns out to have played a central role in approaches to translation through history, often in the form of specialised expressions which evolved to chart developments in society. Indeed, the interdependence of terminology and translation has as long a history as that of translation itself. I will look back at the historical practice of terminology and translation as closely interdependent and evolving activities, a perspective which remains mostly hidden in studies of the 20th and 21st century in Terminology and Translation Studies.

4.2 Terminology for translation: starting from the past

There are different ways of approaching the study of specialised translation practice, from ethnography through technology to cognitive studies. In the context of the present study the view of translation practice – or at least of pre-theoretical approaches – is a mediated one. The literature on translation on which I have drawn here[4] largely reflects what translators have said *about* their practice rather than what they actually did (Rener 1989: 2). And while these

may not be the same things at all (Vermeer 1994: 6–7; Bassnett 2014: 151)[5], in the absence of a major empirical study across many languages, translation scholars are obliged to work with these sources. Such sources have, however, also been positively evaluated as providing the material to create a 'microhistory', reclaiming the details of the everyday lives and working processes of sometimes little-known or forgotten translators and contextualising them to construct a social and cultural history of translation and translators' (Munday 2014: 64). Whilst Munday acknowledges that most of his material relates to literary translation (2014: 78), there is no reason that the same principle cannot apply to *post hoc* 'extra-textual' reflections on and analyses of specialised translation.

Such reflections arose from attempts to solve problems encountered in practice ranging from the comprehension of religious texts in a foreign language for literate clerics to the production of full texts in a vernacular language for laboratory assistants. Perceptions of these problems were focused on words (see Vermeer 1992a, 1992b). Hence, there is no substantial separately identifiable literature on terminology practice: it is closely bound up with translation. We can recall from the discussion in Chapter 2 that LSP translation is still often misleadingly reduced to a term substitution exercise in which bilingual lists of neatly matching terms provide lexical solutions which slot smoothly into place. In this section, the historical roots of terminology use and codification are presented with a view to refuting the 'dogsbody' label often attached to specialised translation in which terms play such a central role.

Of the two levels envisaged in the classical view of language – grammar and rhetoric – grammar can be further sub-divided into choosing words (*electio verborum*), adapting their form to the grammatical context (*etymologia*), and combining them (*syntaxis*) (Rener 1989). It is the first step, that of choosing words, which will concern us here, given the terminological focus of the discussion, before moving on to consider working methods.

4.2.1 Communicating: a word-focussed view

Choosing which terms to use in a translation is often portrayed as a straightforward decision: which term in the target language is closest in meaning to the term in such and such a domain in the source language? In some cases, this is correct. But other issues may well

intervene. Much has been written about the manipulation of literary texts in translation to suit various ideological agendas (for example, Hermans 1985; Lefevere 1992b) as well as about the 'ways in which a text can be used for very different ideological purposes at different times' (Bassnett 2014: 121–2)[6]. But there is evidence that the choice of terms in LSP texts may also be subject to manipulative – or at least cultural – agendas in some cases. An early example from the writing of the classical author Pliny the Elder – his *Naturalis Historia* encyclopaedia – serves to illustrate this claim. Whilst Pliny's text is not a translation, it draws heavily on earlier sources in another language, often unacknowledged, at a time when, in Montgomery's words, authors became 'much more *rewriters* of the already written and rewritten' (2000: 45, *emphasis added*) (see also Chapter 3.5 on 'originals'). Pliny's choice of astronomical terms in Latin is nevertheless of interest. He chooses two military words – *lampades* ('torches') and *bolides* ('missiles') – to distinguish two kinds of meteor, reflecting, as Montgomery points out, the high importance of military events in the Roman experience of the 1st century CE, only later to be changed in medieval writing by monks more attuned to the more celestial 'fiery sticks', 'flying torches', flying angels' and 'splits-in-the-sky' (Montgomery 2000: 58). Although Roman translators are said to have simplified the language of Greek scientific texts for a popular audience of Latin readers by re-using familiar words, much later translations of Pliny's encyclopaedia into English use terms which lend what Montgomery describes as an anachronistic Newtonian flavour to the text, for example, 'revolutions', 'orbits', 'velocity', 'acceleration' (2000: 48–9). Such choices falsely aim to establish a kind of 'final version for use in the epoch of "standard editions"' where none exists in the original, which is an amalgam of texts amended, reorganised and emended 'in accordance with the needs and demands of each era' (ibid.). These examples show that the creation and/or choice of terms can reflect what in a contemporary cognitive framework would be called conceptual metaphor, as frames for understanding the world around us through contemporary social constructs: the military, religion, science.

Whilst Montgomery's informative account points to the importance of sociocultural context in the choice of specialised words, classical authors actually had rules to which they could refer when choosing words in their writing. As we shall see, these principles

resonate with modern-day normative guidance on term formation some two millennia later. Three requirements guided the choice of words in classical antiquity: *proprietas verbi*[7] or the propriety of the word, *puritas verbi* or the purity of the word, and *perspicuitas verbi* or the clarity of the word (Rener 1989: 38–79). The motivation for such criteria arose from the social need to communicate ideas to listeners: things themselves have no need of a name to exist, but human beings need them as part of their attempt to understand and interact with the world. Largely following Rener, the three classical requirements can be glossed as follows.

Proprietas is the 'true' meaning of the word, which is its own. It is sometimes associated with what has been called a nomenclaturist view of lexical meaning, whereby things are called by their 'correct' or 'proper' name, often with religious and political overtones (power over names is power over things). To paraphrase Bellos: words are considered as the divinely sanctioned names of things as invented by humans (2012: 84). The very possibility of translation may therefore be called into question, as well as synonymy,[8] and polysemy, which should also be ruled out. Indeed, within any particular language, the linguistic implication of the nomenclaturist view is the idealised state of univocity, that is, a reversible one-to-one relationship between word and meaning. Such a principle is reported, for example, in relation to the fast developing scientific English of 17th century as 'monoreferentiality', which 'was seen as fundamental in specialized literature as a strict relationship between word and referent [which] would leave no possibility for connotation or other indirect meaning' (Gotti 2003: 165). The principle was seen as promoting 'certainty of meaning', reducing polysemy and synonymy and contributing to accuracy and concision (Gotti 2003: 155). In the 20th century, the German expression *Eineindeutigkeit* captures the same idea, that is, the elimination of polysemy and synonymy, but even Wüster himself as a strong advocate of standardisation regarded this as a pious wish (Wüster 1985/1979: 79; see also Roelcke 1991 for a well-illustrated critique). On the other hand, the view that there are context-free 'true' meanings – that is, universal concepts[9] – also implies that translation is always possible if appropriate forms exist in other languages: translation is then just a matter of exchanging forms, a common belief today among those who commission translations and particularly prevalent with respect to technical

translation, even in some translation circles (see Rogers 1999: 104). The assumption of a true meaning for words also brings with it the assumption of stasis. Even in a modern context of terminological standardisation, it is certainly not assumed that term-concept relations never change; hence standards need to be updated on a regular basis. On balance, however, the principle of *proprietas* seems rather promising in some respects for standardisation purposes, implying as it does univocity, stability (if not stasis), and concept universality. The sense that there is a 'true' – or more modestly, 'optimal' – term for a concept is implicit in all this, even though the motivation is no longer religious, ideological, or political, but rather subject- and system-related.

The second requirement, *puritas*, has a number of components and is the least transparent of the three classical criteria for word selection. Somewhat surprisingly, purity allows some 'non-native' (originally non-Latin) words to be 'naturalised' as well as old words to be reinstated. The whole purpose of *puritas* is oriented towards communication, requiring that the chosen words are understood as part of a shared vocabulary in a particular community (custom). In modern times, this could be understood as discourse communities centred around particular subject fields and anticipates the modern sociolinguistic notion of appropriacy. A further component of *puritas* is the idea of authority, associated with outstanding writers, a characteristic which is discernible in much general-purpose lexicographical work. For national language academies, those authorities were principally literary. In contemporary Terminography, subject-derived authority is also crucial to the validation of terms and their meanings. Lastly, there is the complex notion of 'analogy', which tempers custom (or usage, but whose?) and may lead to the formation of new words from a language's own resources through derivation and compounding.

The last requirement outlined by Rener is that of *perspicuitas* or clarity, in which the judgement of the speaker in relation to their audience is called into action, that audience in classical times being divided into an educated elite and a literate but less well-educated group. Clarity is a principle which was famously adopted, alongside purity, by Martin Luther in order to widen the circle of readers to whom the message of the Bible was accessible in the Saxon variety of 16th century German. As Rener (1989: 98) notes, in his famous open letter (1530, *Sendbrief vom Dolmetschen*) Luther 'puts *puritas* ("rein")

and *perspicuitas* ("klar") among the main objectives while translating the Bible into German'. Clarity was also said to be the most important criterion in the selection of words in earlier translations into Old High German (OHG, circa 760–910 CE), this being achieved through the re-use of accessible existing terminology from previous translations and, very productively, from loan translation (Vermeer 1992b: 146–7).

The classical authors were ostensibly concerned with words in general, but the majority of the examples cited indicate that it is specialist terms which were of particular interest to them. Indeed, the three criteria of 'propriety', 'purity' and 'clarity', rooted in the context of *text* creation, bear notable similarities to the criteria which have emerged for the creation of *terms* from a standardising perspective (see Felber 1984: 179–82; Picht & Draskau 1985: 114–17; Sager 1990: 88–90; ISO 704 2009[10]). Sager has categorised both translation and standardisation as situations which give rise to what he has usefully called 'secondary term formation' in contrast to the creation of terms which 'accompan[ies] concept formation' (Sager 1990: 80; see also Sager 1997: 27–8), that is, creates linguistic designations for discoveries or inventions. In translation and standardisation (so-called secondary contexts for term creation), there is a linguistic precedent: a term in the source text to be translated or an existing term which is subject to some kind of revision, replacement or selection and is being considered for standardisation. There are, of course, differences: in the case of translation, the solution is motivated by the constraints and possibilities of the surrounding target *text* which may not be easily generalisable; in the case of standardisation, the choice is made at the system level in relation to a system of concepts and terms mapping a defined knowledge space or subject field in an attempt to find a general solution for future as yet unrealised communicative acts. The former choice is described as *ad hoc* terminology, the latter as 'systematic' or 'concept-based'.

The formation of new terms, whether primary or secondary, happens in particular languages, but requirements for term formation have been formulated language-independently by terminologists, and it is here that we see similarities to the criteria for the selection of words in the classical model of language. A particular concern with the 'ideal' term, and consequent attempts to make its characteristics explicit, reflects the systematic goals of standardisation work. The

ISO standard on *Terminology work – Principles and methods* (ISO 704 2009[E]: 38–41) sets out seven 'principles' for term formation: transparency, consistency, appropriateness, linguistic economy, derivability and compoundability, linguistic correctness, and preference for the 'native' language. But at the same time it is acknowledged that these 'principles' cannot simply be applied without further considerations. These include 'well-established usage' (which 'has to be respected') and conflicts between principles (for example, transparency and economy). Even textual factors are mentioned, indicating that precision (which appears to be part of transparency) in designations can lead to multi-word[11] terms which are communicatively difficult to handle and may consequently be shortened in *ad hoc* ways, leading to synonyms or homonyms. As a solution, the ISO standard states that it is 'common practice to give the full form (together with the shortened form) when the term first occurs' (ISO 704 2009[E]: 40). Whilst this tactic is certainly sound and common practice for longer terms (or names) and their abbreviations, for example, 'International Organization for Standardization (ISO)', it is questionable whether the reduction or clipping of compounds (as common rather than proper nouns) as a text progresses is meant here (see Chapter 3). In other words, the standard makes only passing reference to the communicative use of terms as opposed to their codification.

The 2009 ISO principles (shown in square brackets below) map fairly closely[12] onto the set of criteria developed some 25 years earlier by Picht & Draskau 1985: 114–17[13] aiming to set out the requirements and preferences for the formation of terms, according to which the term must:

- be well motivated (reflect the underlying concept) [cf. transparency]
- be systematic (be consistent with other terms in the same system or subject field) [cf. consistency]
- be in accordance with the syntax of the language [cf. linguistic correctness]
- be potentially productive of derivations [cf. derivability and compoundability]
- avoid pleonasm (for example, 'gradual scale')
- not contain superfluous elements (for example, 'quartz mineral')
- be as brief as possible without affecting clarity [cf. linguistic economy]

The term should preferably:

- not have synonymous, homonymous or polysemous terms
- not present orthographic or morphological variations

All these requirements need, Picht & Draskau point out, to take into account factors of social acceptability and established usage. These criteria are also included in the 2009 ISO standard under the heading of 'appropriateness', that is, 'adher[ing] to familiar, established patterns of meaning within a language community' (ISO 704[E]: 39), and 'internationalness', usually understood in terms of western European Graeco-Latin influences, echoing the classical concern for purity in the form of custom and analogy. Potential conflicts are, just as in classical times and in the 2009 standard, acknowledged from a communicative point of view. An earlier attempt at developing a set of criteria aimed at scientists and engineers seeking to undertake translations in their specialist areas is less flexible, although provision is made to recognise existing terms, 'even if faulty' (Finch 1969: 39).

Comparing these requirements with the classical trio of word choice criteria produces the following correspondences (avoidance of pleonasm and superfluity have been collapsed as 'avoidance of redundancy') (Table 4.1).

Historically, a clear break with the nomenclaturist position (propriety) had been signalled with the emergence of modern Linguistics by Saussure's insistence that the relationship between the form of a word and its meaning is entirely human, but arbitrary, and certainly not divinely inspired or due to the essence of the thing. As noted here, however, in special-language studies, the link with classical *proprietas* was in a way partly restored by 20th century principles of term formation in so far as standardised terms should be motivated by characteristics of the concept. For instance, the English term 'internal combustion engine' is informative about the mechanics of this type of engine, whereas the German *Ottomotor* (a DIN-approved term), named after its inventor Nicolaus August Otto, is not. In some cases, therefore, coinages are introduced with the intention of replacing existing terms which are judged not to fit stated criteria. Examples of this kind can be found in 17th century English: terms were created to maximise transparency, for example, 'witcraft' for 'logic', 'saywhat' for 'definition', and 'forespeache' for 'preface'

Table 4.1 Comparison of requirements for choice of words in classical sources and requirements for the formation of terms showing potential conflicts between requirements

Term formation criteria (Picht & Draskau 1985)	**Classical precursors**	**Potential conflicts**
motivation	propriety	purity/custom purity/obsolescence
systematicity	clarity	purity/custom
comply with syntax	purity/analogy	
allow derivations	purity/analogy	propriety
avoidance of redundancy	propriety	clarity (explanatory duplication aimed at non-experts)
brevity	clarity (condensed meaning aimed at the expert)	?
univocity	propriety	purity/custom
absence of variation	propriety	purity/custom
social acceptability and usage	purity/custom	propriety
Internationalness	purity/analogy clarity	propriety

(reported in Gotti 2003: 161–2). Such neologisms do not always get adopted in actual use, however (see also Chapter 5).

The line back to the classical view from modern Terminology Studies may in some cases still be explicitly revealed. Sager (1990: 59), for instance, writes of the need in standardisation to identify 'the one regular and *proper* name for a concept to which others are variants' (*emphasis added*). But non-standardised terms may also be motivated in this way, even if by less consciously applied procedures: the cognitively based approach of Socioterminology in a sense also restores the link between form and meaning through its emphasis on the role of metaphor in the formation of concepts and terms, although this is not a system-based but a text-based, experiential view (see Myking 2001: 56–7).

But given the three principles to guide us in our choice of words, where are these words to come from in languages in which emerging

specialised concepts have not previously been linguistically expressed, regardless of whether the source is in Latin or Greek, or one of the vernacular languages? In fact, many Latin texts were themselves translations, their creators having faced precisely the same problem when translating from the original Greek. The problem has then been a common one for millennia for translators, since the texts to be translated were often of a specialised nature concerned with Religion, Astronomy, Administration, Law, Arts, Medicine and Science (see, for instance, Bellos 2012: 177, 213, 218). As Rener (1989: 99) points out, it wasn't only the problems which had been known for millennia but also '[m]ost of the methods for solving such problems [which] had been devised by the Romans'. These methods are borrowing, neology (often including various kinds of loan translation) and circumlocution (the use of more than one word, that is, a kind of paraphrase) (see Chapter 5 for a detailed discussion of these methods).

Confronted with lexical gaps in both special-language and literary texts, modern-day translators may find these solutions familiar. In Table 4.2, the three classical requirements for the selection of words (shared by all authors) are related to the methods recommended for sourcing or creating them in a translation context.

Table 4.2 suggests that neology is the optimal method for closing terminological gaps in keeping with the classical criteria. Picht & Draskau also advocate coinage by derivation or compounding in their requirements for term formation as it seems to meet all the classical criteria of word choice. In actual practice, however, translators were not confined to the three methods shown: it was quite possible in order to meet the strict criteria of propriety, purity and clarity to combine two methods such as loan + neologism, or loan + circumlocution, the latter solution foreshadowing the ISO standard in the form of a couplet (see footnote 12). Such couplets, also known as 'doublets', had a good pedigree in Cicero (106–43 BCE) and Quintilian (*circa* 35–95 CE). The same strategy is reported for 17th century English 'in the form of a paraphrase or synonym when [new terms] first appear in the text' as in 'animate or gyue courage to others' (Gotti 2003: 161). Again, this communicative strategy cannot be unfamiliar to modern translators (see, for instance, Newmark 1988: 91) as translators do not have the luxury of leaving a gap in the target text, although the *ad hoc* and text-bound nature of the solution does not lend itself easily to systematic representation in

Table 4.2 Comparison of requirements for choice of words in classical sources and means of filling lexical gaps in translation

	Propriety	**Purity**	**Clarity**
Borrowing	+[a]	–	–
Neologisms	+[b]	+[c]	+[d]
Circumlocution	–	+[e]	+

[a]possible if the object named originates in and belongs to another culture;
[b]possible if the concept which is named is also new;
[c]possible if the neologism is well motivated and therefore conceptually transparent; alternatively, obsolete words may be re-introduced and possibly re-semanticised; also covers 'analogical' creation of new words through compounding and derivation;
[d]in the sense that the neologism may be targeted at a particular group within the discourse community and be more transparent than a borrowed term;
[e]in the sense that it has meaning within the community where it is used.

dictionaries, termbases and so on. Such decisions clearly belong to the area of translator competence.

Translators may, of course, include explanatory notes on new concepts and their possible linguistic designations in their private glossaries as a basis for their own future re-use, but this is often done in a piecemeal way. Working in teams which are managed by a project leader, however, calls for a more co-ordinated approach.

4.2.2 Working methods[14]

So far, the choices that translators (or terminologists[15]) have to make in selecting or creating terms have been considered in principle. But the ways in which choices are made are in practice constrained by social and professional conditions. Teamwork is not an invention of the digital and virtual age. In the modern era, Kiraly (2000: 14) stresses the importance of collaboration as an essential part of what he calls 'translator competence': 'knowing how to work cooperatively within the various overlapping communities of translators and subject matter experts to accomplish work collaboratively' (see also Finch 1969: 20–21; Pinchuk 1977: 247; Wright & Wright 1993a: 1). Such collaboration has many early precedents that could be construed as examples of translators working together and with other experts to solve key terminology problems. Luther's translation

of the Bible is reported by Woodsworth (1998: 41) to have been conducted together with a group of scholars, and collaborative work was said to be especially prevalent in the case of religious works in the 16th century (Amos 2001/1920: 82–3). Moreover, Pym (1998: 34) sees many collaborative enterprises as the precursors of formal training, from the translation of Buddhist texts in 4th–8th century China to the Toledo School of 12th century Spain. An early form of teamwork aimed at the organisation and re-organisation of lexical data, which could in modern-day terms be understood as terminology work, is reported among Bavarian monks between the 9th and 11th centuries (Vermeer 1992b: 128): their work consisted in amalgamating earlier glossaries, the aim of which had been to aid understanding of particular foreign-language texts. Today's translation companies aim to re-use lexical data by exporting/importing and merging electronic terminology collections of varying provenance; here we might talk of legacy data.

Modern-day students of specialised translation are strongly encouraged to consult subject experts in their quest to understand unfamiliar source-language terms and/or to fill terminological gaps in the target language. Their starting point as novice translators may well be the expectation that a good set of specialised dictionaries and approved websites will provide them with all the answers they need, but experience soon disabuses them of such naïve assumptions.[16] Consulting experts in order to solve terminology problems has a long history as many sources indicate, although it is not always clear whether the expertise sought concerns the source language or text, the target language, or both. St. Jerome is said to have employed a rabbi as a linguistic informant when translating the Hebrew Old Testament, and Wycliffe's Bible translation team included theologians as well as Latin experts (Kelly 1979: 126). A similar approach is reported for the (second) Wycliffite Bible (1380–1384), as recorded in the Prologue (1395–1396), where the translators counselled '"with old grammarians and old divines" about hard words and complex meanings' (Bassnett 1991: 47). Luther, according to Woodsworth (1998: 41), also experienced terminological problems when translating the Bible, and found it necessary to consult foresters, gamekeepers and so on, for their knowledge of specialist terminology.

In the 21st century, translators consult many different sources in their search for subject-specific translation solutions, as did translators in the past, according to Kelly; even where dictionaries were available, which in any case 'seem to have drifted into translation from the classroom', the 'best translators' always looked to other translations and texts, supplementing bilingual with monolingual dictionaries (Kelly 1979: 127, 129; see also Pinchuk 1977: 247). The need for consultation with subject-field experts must have been crucial to the translation into Latin of Greek and Arabic texts in the Toledo School in Medicine, Mathematics, Astronomy and Astrology (Woodsworth 1998: 40). And Delisle & Woodsworth note collaboration between translators (Christian missionaries) and subject experts such as scientists, mathematicians and government officials from the 16th century on (1995: 106–7). But literary translators should not be forgotten here – they also need to consult with experts: Newmark (1991: 37–8) reports similar co-operative practices in the 19th and 20th centuries, citing the example of Lowe-Porter's English translation of the distinguished German writer Thomas Mann. Translators of poetry also work collaboratively in many cases. Sometimes they may work with the poet of the source-language texts (see Jenny Williams [Williams 2005] on her collaboration with German poet Sabine Lange), sometimes with a poet of the target language, possibly even without the poet knowing the language of the original poem with the result being known as a 'version' (see Venuti 2013: 176). But the collaborative working of modern specialised translation teams is rather different: a long text may be broken up and distributed to a number of translators to meet a tight deadline, one of the team may be charged with a preparatory aspect of the work such as building a customised termbase, another in the team may be responsible for managing updates to the source material and liaising with technical authors and the translators, and so on.

The modern translation market is characterised by increasing expectations of speed. But translators in history have also commented on the frustrations of delay arising from the need to find the 'proper' word in what the translator experienced as an impoverished target language. Luther bewailed the fact that it sometimes took two or three weeks to find a single word for his Bible translation, and a 17th century secular translator claimed that he

was often forced 'to search and study some time for those [words] most proper' (reported in Rener 1989: 97). In today's highly competitive translation market, late delivery of a translation may result in more than frustration. Literary translators are, for example, in certain cases subject to strict contractual deadlines for intensely marketed books – treated much like any other product – such as J.K. Rowling's *Harry Potter* volumes, which were not distributed to translators before the English original had been published. In LSP translation, say, of a product user manual, possible delays in the shipment of the product in the absence of complete documentation is known as a failure to observe 'simship' (Wilss 1999: 216) and has clear legal and financial consequences. In the context of specialised translation and the growth of specialist knowledge, we are further reminded by Wilss of the important role played by terminology in the speedy delivery of translations: 'Efficient, reliable and fast specialist translation is not possible without extensive terminology work' (1999: 88). It is now generally agreed that the manual management of terminological data is no longer feasible on any scale, if efficiency and quality are to be maintained. Where the task of medieval and Renaissance translators was facilitated by the existence of previous translations and glossaries, so the task of today's translators is further facilitated by electronic tools including translation memory, terminology management systems, the World Wide Web and electronic glossaries/termbases. Taking advantage of all the electronic resources available, some translation companies also choose to employ a terminologist to co-ordinate the complex operation of terminology management, involving large teams of translators – many working remotely – in multiple languages serving numerous clients.

4.3 Developments in the practice of terminology

Looking at the past can not only give us a sense of perspective and continuity, but may also help to illuminate current practice, in relation, for instance, to dictionary archetypes, the ordering principles of glossaries, and the purpose of glossaries *vis à vis* texts. This section traces some links between early attempts at codifying lexical choices and their relationship to translation, moving on to develop some textual aspects of terminology choice.

4.3.1 Early developments in lexical codification

In the classical view of translation, words were thought of as the building blocks of texts, including translations, providing the foundation for a stable structure (see Rener 1989), a metaphor which still resonates in Translation Studies today. Wilss (1999: 214), for instance, follows the classical model in arguing – rather unfashionably – that 'success in communicating depends primarily on our choice of words'. Chesterman calls this the 'translation is rebuilding' meme[17] (2000: 21). As noted earlier in this chapter, the problem for translators introducing new concepts from other languages and cultures has been finding the words in the first place, since they often do not exist in the target language. Historically, the need to fill terminological gaps therefore assumed considerable importance as languages developed or were used for more specialised purposes. As one example, Vermeer points out that in the translation of texts into OHG, terminology for Christian concepts, Law, and Medicine had to be found, with the creation of dictionaries being the first 'literary works' in this enterprise (1992b: 93, 100–103). Names for the objects of everyday life – food, buildings, tools, weapons and so on – were already part of the oral tradition of the Germanic dialects; according to Vermeer, it was the abstract terms of the new religion which were the problem in translation. A similar problem is reported for Jesuit missionaries in China in the 17th century: how to translate key Catholic concepts such as *Deus*, *anima* and *angelus* ('God', 'soul', 'angel') into classical Chinese, based on the Vulgate version of the Bible (Golden 2009: 377).

In view of their importance as collections of basic building materials, glossaries have been recorded and listed according to some estimates for over four millennia, dating from the first known written records in Mesopotamia. Delisle & Woodsworth (1995: 229, 232)[18] place the first known 'dictionary' in the form of Sumerian tablets around 2600 BCE, with the earliest bilingual lexicographical work emerging by 1900 BCE when Sumerian scribes added Akkadian equivalents to Sumerian words on tablets.[19] It seems that these tablets were organised thematically around subjects such as occupations, kinship, law, various artefacts, and materials, animals, and parts of the body, 'corresponding directly to today's [...] "special purpose" dictionaries' (Bellos 2012: 95). Vermeer (1992a: 51) also

reports sources describing the production of various kinds of word lists for ritualistic and 'scientific' purposes in Mesopotamia, indicating some knowledge of what we might today call Botany, Mineralogy and Zoology, and providing the basis for later bi- and multilingual 'dictionaries'. Elsewhere, the earliest known codified lexica have been dated to around the 5th–3rd century BCE, having been created to aid understanding of problematic terms in Ancient Greek literary texts, notably those of Homer. According to Collison (1982: 26, 183) one such alphabetically arranged glossary by Zenodotus of Ephesus even included definitions, although these were often the result of guesswork. Collison also places the earliest known non-literary vocabularies of 'specialised subjects' rather late in the 2nd century CE (1982: 183).

Many early specialised dictionaries or glossaries dealt with medical terms. Monolingual glossaries were produced in the first and second centuries CE to explain technical terms used by Hippocrates, the reputed 'father of Western medicine', one by a grammarian (Herodian) and one by a physician (Herodotus), signalling the early involvement of subject-matter experts in specialised Lexicography; later examples include multilingual dictionaries of medical terms, such as one compiled by a 9th century physician of organs and diseases in Greek, Syriac, Persian, Hindi and Arabic (Delisle & Woodsworth 1995: 237–8). The appearance of specialised glossaries in the West is dated much later, to the Renaissance, when the link between specialised Lexicography and translation emerges through the inclusion of glossaries with translations (ibid.). Kelly (1979: 130) comments on the frequency of this practice in connection with treatises on science and Medicine, which often included bilingual or trilingual glossaries. Unfortunately, few details are available to tell us more about the form and nature of these glossaries. Early lexicographers of modern as opposed to classical languages also concentrated on 'difficult words', assuming there was not much point including those whose meanings everyone already knew (Collison 1982: 31, 59). This casts an interesting light on the status of what we today know as general-purpose dictionaries, which are often erroneously considered to be the archetype. Only with the founding of the national academies in 17th and 18th century western Europe were dictionaries really conceived as lexical records of a language

as a whole, whatever that might have meant or could mean. As these prestigious volumes began to include an increasing number of (highly polysemous) non-specialist words, or combined many different subject fields, it is perhaps not surprising that the motivation for any ordering other than alphabetical was weakened.

It was against this background of alphabetically ordered dictionaries that Eugen Wüster's General Theory of Terminology (GTT) emerged in the early 20th century. It is recognised to have its practical roots in the industrial expansion of the mid-19th century, which gave rise by the beginning of the 20th century to the need, according to Arntz & Picht, for systematic clarification of the vocabulary used in the burgeoning new technologies (1995: 141). So it shared with two millennia of translators the link with knowledge growth and transfer. But references in the associated literature to the precursors of the practice of terminology are often to early scientists working *mono*lingually in the context of an increasing specialisation of knowledge in the natural sciences rather than to lexicographical precedents. And so Arntz & Picht (1995: 140) report on Vesalius's (1514–1564) attempts to clarify the terminology of the new science of Anatomy, Dürer's (1471–1528) unsuccessful efforts to create a German terminology of Mathematics, Linnaeus's (1707–1778) enduring system for botanical nomenclature and Jakob Berzelius's (1779–1848) work in Chemistry. Later developments in Terminology Studies have given greater emphasis to language planning in minority situations and to translation.

However, despite a long history concerned with specialist vocabularies, the practice of *bi-* or *multi*lingual Lexicography is not extensively discussed in the literature of Terminology. The one work which *is* cited (particularly in relation to the GTT) is Schlomann's pioneering 17-volume 'systematic' illustrated dictionaries covering 17 subject fields in six languages (1900–1932, reported in Wüster 1974: 76; Felber 1998: 70).[20] The reason for Schlomann's prominence – like Wüster he was an engineer – is that he used a subject-based rather than alphabetical approach, receiving his commission from the *Verein Deutscher Ingenieure* after the collapse of a monolingual alphabetical dictionary project – the so-called *Technolexikon* – three years and 3.6 million record cards into the project. Alphabetical ordering, the most common ordering principle for dictionaries today, was, however,

rarely used before the end of the first millennium, and even then, usually only according to the first or first and second letters, since lexicographical practice was a manual task in all respects. The first alphabetically ordered dictionary in German – in fact the first known book – was the so-called *Abrogans*, an 8th century translation into the emerging written language of OHG of a dictionary of synonyms for rare and archaic expressions from late Latin literature (Vermeer 1992b: 111). Derived from the first entry in the original Latin, the name of the dictionary indicates its *quasi*-alphabetical ordering.

Glossaries either followed the order of words in a text, or were thematically organised according to subject, as in some early Greek and Roman lexica (Collison 1982: 42, 40). In Old English, an Oxfordshire abbot named Aelfric, a distinguished translator and successor of King Alfred, compiled a Latin-English glossary with 1,269 headwords according to subject, not form, according to Vermeer. There is also evidence of this ordering being transferred to translations of dictionaries, as, for instance, in the first specialised dictionary in (Old High) German, the pedagogically oriented *Hermeneumata*, originally a Latin-Greek and then Latin-Anglo Saxon dictionary, which retained a word list ordered according to subject (Vermeer 1992b: 69, 119–20), possibly an expedient rather than a motivated choice.

So Schlomann was following in a long tradition, although the sheer scope of his project clearly distinguishes it from these early examples. Wüster reports (1974: 76) that in 1952, the French scholar Walther von Wartburg was fêted at an international conference of linguists for his insight that a subject-based ordering of dictionaries was to be preferred to the 'stupid alphabet' (*das dumme Alphabet*), remarking with some satisfaction that the 'breakthrough from alphabetical to systematic [subject-based] dictionaries' (*der Durchbruch von den alphabetischen zu den systematischen Wörterbüchern*) had taken place in the discipline of *Terminologiewissenschaft* some 50 years earlier. But there are much earlier precedents, even though it is hard to establish from the literature exactly what form early subject-based – as opposed to text-based – glossaries took.

4.3.2 Terminology and translation: from word to text

It was noted at the beginning of this chapter that a word-based view of specialised translation and the study of terminology are synergistic. Indeed, the concept-based view of terminology theory and

practice today retains significant features of the classical building metaphor which was originally applied to writing and translation. The emphasis on the role of terms as linguistic labels for elements of thought or knowledge (that is, concepts) in some kind of ordered system is based on an Aristotelian classification of fixed concepts as abstractions of human thinking. Here the metaphor is related to the construction of knowledge systems – or even 'ontologies' – rather than texts. But a textual orientation is now characteristic not only of major approaches in Translation Studies, but also, more recently, of Terminology Studies (see, for instance, Gerzymisch-Arbogast 1996; Shreve 2001; Rogers 2009). This leads us to ask in what way terms might be viewed as contributors to texts rather than as interchangeable labels or, exploiting the building metaphor, standard bricks which can be moved from the builder's yard, where they have been piled up according to type, to the three-dimensional building under construction which has a specific social function.

Let us look at one particular aspect of the textual role of terms which illustrates two standards of textuality (after Beaugrande & Dressler 1981), namely situationality and acceptability. As terms frequently assume the form of nominal compounds, they are subject to formal variation, not only as cohesive items occurring in a particular text-derived order, as noted earlier, but also according to the level of specificity appropriate to the context. In a study of the pragmatics of terms used in the Norwegian petroleum industry, Andersen (2002) argues that the degree of specification of terms, that is, their potential for ambiguity, decreases with their level of morphosyntactic complexity, a topic, as he acknowledges, already touched on by Wüster (1985/1979: 46–7). In other words, a term such as the relatively economical *avvidsdokumentering* ('deviation documentation') is less specific and open to more interpretations (for example, documentation as product or process) than the syntactically more explicit *borer dokumenterer avvik* ('driller documents deviation'). Andersen presents these possibilities – which represent points on a scale of specificity – as a legitimate part of the functional flexibility of natural language to serve as an efficient communication tool in line with the pragmatic expectations of its users. Shared knowledge, he argues, is not normally encoded in communications, and so, we can conclude, experts may prefer more economical forms, in line with one of the accepted criteria for term formation. However,

Andersen also reports that even economical tightly packed terms such as *drivrør* ('rotating drill pipe') may be overspecified for experts in some situations, in which unmotivated terms are then preferred, such as the English loan *kelly*. So in this respect, in the way they are used, terms are clearly sensitive to communicative issues which go beyond a labelling or purely referential function. They are closely bound together with textual (including pragmatic) and context-sensitive characteristics.

Other terminological principles which are called into question by the embedding of terms in texts, that is, their use for communicative purposes, include consistency of both form and content. In the former case, the analysis of textual patterns – both in source texts and their translations – indicates that cohesive conventions can mitigate against the repetition of multiword or multicomponent terms on the grounds of overspecification, which has the potential to disturb the reader's or listener's sense of given and new (Rogers 2007). In the latter case, different characteristics of the definitional meaning may be activated, leading to what could be called a shift in perspective, or 'perspectivisation' (Rogers 1999, 2004b, 2007).

How variation in the use of terms in source texts is to be handled presents considerable problems for the translator, who has to decide whether to attempt a replication of some kind of the terminological variation in the source text, or whether to follow the mantra of terminological consistency in the target text at all costs (see Rogers 2008 for a discussion of consistency in the use of terms). The risk which the translator runs in attempting to replicate the source-text terminological variation in the target text is that even greater variation will be introduced in the target language as loans and calques of various kinds are produced in translation (see Humbley & García Palacios 2012: 78, 81 footnote 8) without a clear motivation. The risk entailed by flattening out the variation is that important textual or other functions may be lost, endangering the cohesion and/or the coherence of the text. Following the pattern of variation in the source text may also disrupt cohesion in the target text, in which cohesion is realised in different ways. For these reasons, the lexical chains – and hence the number of textual synonyms in each language – in source texts and translations may vary in their patterning (see also Baker 2011: 192–6), even in safety-critical texts such as instructions for use by patients: compare, for instance, the terms used to refer to a

breathing device in the opening paragraph of trilingual user documentation (Rogers 2007):

- German source: *Ausatemsystem Schalldämpfer / Schalldämpfer / Schalldämpfer / Schalldämpfer*
- English translation: 'muffling system' / 'muffling system' / 'muffling system' / 'muffling system'
- French translation: *valve d'expiration de type silencieux / silencieux / dispositif / silencieux*

In all – that is, throughout the whole text – the German text uses three textual synonyms and one hyperonym; the English text uses two synonyms and one hyperonym; and the French text, the lexically most varied, uses five synonyms, three hyperonyms and one pronominal co-reference.

The habitats and therefore the constraints and affordances of terms as lexical items in texts and as lexemes in terminology collections are different, leaving considerable decision-making space for translators on the one hand to re-embed lexemes in a textually skilful way, and on the other hand to interpret texts in order to codify terms and their associated data in such a way that they can be appropriately re-used in a textually sensitive way for communicative purposes.

4.4 Linking knowledge and translation through terms

The growth of knowledge which is setting the pace for the early 21st century global economy is an acceleration of earlier developments. In western Europe, the 17th and 18th centuries are particularly well known as periods of scientific and technical explosion, and the 19th century as a time of increasing international travel and trade, bringing more languages into contact. These developments led to an increased need for translators and dictionaries since 'new vocabulary had to be defined and translated' (Delisle & Woodsworth 1995: 238; see also Collison 1982: 92). In this section, attention is focused on the role which specialist knowledge has played in driving the practice of both translation and, along with it, terminology.

4.4.1 Giving voice to knowledge

As we have seen in the current and previous chapters, translators have played a key role in introducing specialist knowledge to new

readerships through the ages. In relation to the translation of science in particular the work of Montgomery (2000), and more recently of Olohan & Salama-Carr (2011) is notable. We can also recall the mismatch between the communicative importance of 'scientific and technical translation activity in the professional world' and the 'attention it receives in the academic discipline' (Olohan 2009: 247). Indeed, it is hard to overlook the irony in the fact that 'although very few translation training programmes prepare translators for professional work without engaging with scientific texts, translation studies as a discipline draws its examples or case studies overwhelmingly from other [non-scientific] types of discourse' (Olohan & Salama-Carr 2011: 180).

Starting from the medieval period in western Europe, changing social ideas began to raise the question of accessibility not only of religious knowledge, but also later of secular knowledge, available primarily in Latin texts. The intention was not to encourage the population at large to read these texts for themselves: they were mostly illiterate. Certainly as far as the Bible was concerned, Christian clerics wanted to develop a vernacular language for proselytising purposes. Since one of the main problems they faced was, as already noted, the abstract terminology of Christian theology, it became an important task to develop a vernacular alternative. Indeed, the emergence of OHG as a written language (mid-8th–mid-11th centuries) can in some respects be characterised as the search for new terms to convey scientific and Christian ideas, and the attempt to imbue existing terms, such as *got* ('god'), with new meanings (Vermeer 1992b: 85, 101).

It was not only in the world of religion that translations into vernacular languages continued to be important, especially around the time of the Reformation in Europe, sometimes at great risk to the translator (see Bobrick 2001 for a useful account of William Tyndale's life and death as a 'heretic'), a similar trend is noted in the translation of 'literatures' across Europe in the 15th and 16th centuries (Bassnett 2014: 91), as well as in the increasingly specialised secular fields. It became important within particular societies, for instance, that related but less educated groups had access to certain knowledge – this mainly for practical rather than ideological reasons. Medical and pedagogical texts in the OHG period, for instance, often contained a mixture of Latin and German in order to help assistants and pupils less schooled in Latin than their masters (Vermeer 1992b: 151–2, 182). This need continued to be felt until much later: in the

17th century the devolution of certain duties from the gentleman scientist to laboratory assistants and apprentices in the experimental sciences, particularly Pharmacology and Chemistry, necessitated the translation of key texts, such as the *Basilica chymia* (1609) of Oswald Croll, into vernacular languages (Kelly 1979: 86). There is also some evidence that scientists in the 17th and 18th centuries saw it as part of their work to help establish scientific languages in the vernacular: the early 17th century German mathematician and astronomer Johannes Kepler translated his own work from the original Latin into German in order to reach a wider audience and to add prestige to the vernacular (Fluck 1985: 30). A modern-day parallel can be seen in the need for local languages in developing countries to succeed European *lingua francas* once concepts leave the rather closed world of research and academia, and science interfaces with broader audiences in technology (Sager 1990: 81; see Antia [2000] for a more contemporary example, elaborated below).

The desire to share in the knowledge store of other cultures and languages was another factor driving the need for translation. An early example can be found in the 5th century translations of medical texts from Ancient Greece, India and China by Nestorian Christians settled in what is now south west Iran (Delisle & Woodsworth 1995: 102–3)[21]. Chinese, Sanskrit, Greek, Syriac, Latin and Arabic served as 'vehicles of scientific advance […] from ancient times to the Middle Ages', according to Bellos (2012: 11). The translators of Baghdad (9th–13th centuries), Toledo (12th and 13th centuries) and medieval Europe also helped to 'develop a scientific language, a learned register for the vernacular'; in fact, a kind of diachronic relay translation can be said to have operated as the knowledge of Ancient Greece, India and China was spread from language to language; for example, Ancient Greek and Syriac (Ancient Aramaic) manuscripts housed in Baghdad's House of Wisdom were translated into 9th century Arabic, then into 12th century Latin in Toledo, followed by translations into European vernaculars in the medieval and Renaissance periods (Delisle & Woodsworth 1995: 124, 102–3). As time progressed, science was increasingly being written in the vernacular languages of Europe: Italian and French played an important role in the European Renaissance, with Swedish, and then German and Russian in the 19th century playing a major part in the dissemination of the developing science of Chemistry (Bellos 2012: 11–2). We have already

noted (see Chapter 2) the switch to the vernacular for scientific writing in 16th and 17th century England and its concomitant problems of an underdeveloped specialist vocabulary. The role of translators in spreading 'a scientific terminology, especially in medicine' is of particular note (Kelly 1979: 138). In this connection, Fischbach also notes that 'the importance of scientific translation in the transfer of modern information and technology is axiomatic', claiming that 'the first [science] to be so richly fertilized by translation' was Medicine (1993: 89, 92).

Exactness in terminology was from the late Roman period (the Roman philosopher Boethius, *circa* 480–524 CE) through the medieval period (the English philosopher and scientist Roger Bacon, *circa* 1214–1294 CE) consistently seen as 'a mainspring of transmission of science and the word of God' (Kelly 1979: 134–5, 132; see also Stolze 1997: 19). Far from being overshadowed by belletristic works of the literary canon, specialist texts in both Arts and Sciences were said to present the 'greatest challenge to the translator', as the terminology, which was crucial to the content of the texts, could not easily be translated by reference to any dictionaries (Rener 1989: 99). As a result, translators have for centuries been creating their own 'dictionaries', often called 'glossaries', a rather catch-all term, as we have seen.

4.4.2 More on glossaries

How can the content of foreign-language texts be accessed and how can a vocabulary be built up to communicate the new ideas found there? Before scholars began producing full-text translations, it was common practice to mark or 'gloss' the meaning of unfamiliar or difficult words, or what we would now mostly call terms. The glossing of texts has a long history, going back to the Ancient Greeks. Glosses, as aids to the comprehension of the original foreign-language text, could appear in the margin or above the word in question (interlinear gloss). The early efforts in German monasteries to gloss texts illustrate how efforts were focused on texts from specialist fields, including Medicine, Law, Natural Science, Philosophy, Grammar, as well as classical and religious literature, and biblical texts (Vermeer 1992b: 122–6). Glosses, at some point transposed from the text and collated into a list, still preserved the order in which the glossed words appeared in the text. These early glossaries 'preserved their integrity since it was always possible to study the context of any word

or phrase under discussion' (Collison 1982: 36). Examples can also be found in the 'hard words' of 17th century English, often Latinate forms, which were 'provided by the publisher at the end of the book with an explanation of the new terms' (Gotti 2003: 161, 175).

However, when individual sets of glosses began to be combined (see Section 2 above), the context was lost and became untraceable in the absence of any textual reference point (see also Vermeer 1992b: 109 for OHG). The order of presentation also tended to change over time, from the original order of the extracted glosses in the text, without which the listed words were of little use, to alphabetical order (we can recall that this originally only applied to the first two letters of each entry) so that 'the dictionary principle took precedence over context' (Collison 1982).

While the purpose of text-derived glossaries was to facilitate the comprehension of a text in another language, as a technique it can be viewed as a forerunner of translation as a creative activity. The transition from intermittent word-based glossing to the sense-based translation of full texts brings into question the purpose of glossaries appended to target texts which now function in their own right (Vermeer 1992b: 144–6). The import of the question lessens, however, once glosses are detached from their original source text, amalgamated with other glossaries, and definitions added, or once the glosses are matched bilingually, at which point – as glossaries – they become reference sources for the production and comprehension of future texts, not just a guide to the present foreign-language text.

The construction of glossaries today may still originate from some kind of private interlinear marking by the translator, although this becomes less likely with the use of word processing and other software. The predominant sense of 'glossary', at least in a translation context, has shifted away from a collection of difficult words from *any* subject field found in a single text towards a subject-based collection of terms. Glossaries can be bilingual or multilingual and may contain definitions.[22] Just as ancient and medieval translators compiled their own lexicons from their translations and reading, we are told, so did 20th century translators, motivated all the more by the 'modern scientific explosion' (Kelly 1979: 130; see also Wilss 1999: 90). It is now becoming more feasible for 'glossaries' to be constructed using corpora of texts collected for that purpose, usually in electronic format (see also Chapter 3), so the text-terminology link is

maintained, as in the original hand-crafted glossaries, but in a rather different way through software links. This represents the confluence of two trends: documentation as the traditional basis for terminology or glossary compilation on the one hand, and computerised corpus-based Lexicography or Terminography (see Bowker 1996; Ahmad & Rogers 2001; Bowker & Pearson 2002) on the other hand.

An interesting example of contemporary glossary compilation, which also incorporates the principles of term formation, is described by Antia (Antia 2000) in the context of lesser-used languages. He reports on an innovative methodology for compiling a legal terminology as part of the transfer of knowledge between English (UK and US) and the Nigerian language Efik, in which no relevant textual resources could be identified. Antia's solution was to work initially with terminologically rich UK and US texts on the basis of some synergies with the Nigerian system in order to identify and conceptually model key terms for 'forms of substantive legislative action and procedural activities' (2000: 182). In the second phase, a small group of Efik experts given basic training in selected terminological methods and aspects of translation were asked to provide Efik equivalents. The tests to which Antia's proposed 187 Efik terms were subjected included derivability, collocability and 'series uniformity' (consistency within a system of terms). In the latter case, Antia suggests that greater clarity could sometimes be achieved in Efik than in the source language, reflecting the *planning* aspect of the work (see Sager 1990: 85). One of the most interesting aspects of Antia's study for our present purposes is the linguistic basis for the target-language terms. Only four were borrowed – with assimilation to Efik orthography and phonology, for example, 'guillotine' becomes *kioṭịn*. The majority of terms are multiword neologisms derived from existing Efik resources, confirming earlier observations concerning the utility of this method. Single-word terms were created through re-semanticisation by being assigned a specialised sense in the chosen domain, that is, terminologised. Circumlocutions were avoided because of the difficulties they pose for compounding.

4.5 Conclusion

In this chapter, a long history has been demonstrated between translation and terminology, drawing attention to points of contact

between classical and modern concerns, notably in relation to term formation and standardisation. The history of translation has been closely linked with the development of special-language vocabularies as knowledge is transferred between languages and cultures. The widespread modern practice of team working in the delivery of specialised translation has been shown to have many historical precedents, including the use of previous translations and consultation with what we would now call domain experts. It has also been shown not only that some of the earliest known written records consist of bilingual lexical resources, but also that a thematic organisation of glossaries (following earlier text-based ordering) pre-dated an alphabetical ordering. This was later to become the assumed default for general-purpose dictionaries, but proved less well motivated and more difficult to handle for special-purpose dictionaries, as they aspire to a comprehensive and systematic coverage of a particular subject field, however broadly defined. Historically, the disengagement of glossed words from their texts gave rise to problems of interpretation and of organisation. The absence of a context meant that the particular use of the glossed word and its proposed translation could not be easily judged, and the motivation for the ordering of the glosses was lost. In today's largely alphabetically organised specialist dictionaries, contexts are still rare and subject labelling may be patchy and inconsistent. Hence, the translator wishing to make the transition from codified source to text still often has insufficient and inadequate information on both a linguistic and a conceptual level. 'Text-text' solutions are therefore becoming more prominent.

An early focus on the word has been associated with the need to facilitate the comprehension of texts written in one language – often Latin – in another. Glossing these problematic words and revealing and labelling new concepts in the target language helped to establish the basis for the eventual translation of whole texts. On the other hand, it led to the compilation of glossaries in particular subjects as independent resources rather than as an accompaniment to certain texts. These early developments are still reflected today in the different perspectives assumed by translators and terminologists, the one dealing primarily with language use, the other with language systems as their end-products.

Despite this long history, Franco Aixelá's 2004 review (see Chapter 2) of the development of Translation Studies in the West indicates

that the academic status of works concerned with 'technical texts, terminology and language for specific purposes is a very modern issue': it was not until the 1950s that what Franco Aixelá describes as 'a deep change in Translation Studies' away from Bible translation and a 'traditional fixation' on the literary canon towards an increasing research interest in the 'questions actually facing translators' began (2004: 44). In this chapter I have attempted to establish a retrospective basis for this 'turn'.

In the next chapter the three strategies advocated since classical antiquity for filling terminological lacunae in texts – borrowing, neologisms, circumlocution – are considered in more detail, demonstrating some of the challenges faced by specialised translators in particular across the millennia.

5
Terminology and Text: Closing the Gaps

5.1 Introduction

Whilst it is generally accepted that languages map the world in different ways through the structure of their vocabularies, it is often wrongly assumed – as we have seen in previous chapters – that specialist areas of knowledge are culture-free zones with a universal character, especially in Science and Technology. If that were the case, closing the lexical gaps in specialised translation would be largely reduced to a straightforward coining task to label concepts new to the target culture, with no troubling factors of connotation or nuance, not to mention issues of ideology, politics, or religion. We have already seen (Chapter 4) how such factors can influence the choice of terms, even in science writing. The current chapter goes on to document some of the complex decisions which translators, and to some extent terminologists, actually make and have made for millennia when terminological gaps are identified in the target language.

Reference has been made throughout this volume to the contribution made by translators to many civilisations and in particular to the mobility of knowledge, as noted by many scholars (for example, Kelly 1979; Delisle & Woodsworth 1995; Montgomery 2000; Olohan & Salama-Carr 2011). Specialist vocabulary is the engine of this knowledge. As Montgomery observes (2000: 1), coinage or the 'creation of vocabularies' is part of what he calls the 'textual reality' of the 'history of science in any single tongue'. But as we can recall, coinage – understood here as the creation of new lexical forms to convey new meanings – is certainly not the only way to fill the terminological

gaps opened up by the intercultural and interlinguistic movement of knowledge, following innovation in the source language and culture, or by the transfer of material which is culturally specific to a new environment. The first case is likely to concern Science and Technology, the latter, Social Sciences and Arts.

The chapter starts by looking at what it means to talk of 'lexical gaps', before moving on to examine in greater detail the three solutions first proposed over two millennia ago – borrowing, neology and circumlocution – and pointing out their continuing relevance in various forms to modern translation practice, wherever those gaps occur.

5.2 What is a 'lexical gap'?

How is the concept of the lexical, or more specifically, terminological gap to be understood? Is it a particular word form or expression missing in a target text? Or is it a lexeme missing in one language in a bilingual glossary? Is a gap filled once a translator finds a text-specific solution or only once a term has achieved consensual acceptance in a codified collection? These questions reveal in turn the perspective of the translator and the terminologist (see also Sager 2001: 259 on *parole* and *langue* respectively). How such gaps have been treated varies accordingly. The words and terms which fill those gaps are, of course, 'neologisms' in one sense or another (more of which below).

5.2.1 Some views on the classical trio

It was noted in the previous chapter that the three broad solutions to the problem of closing lexical gaps in translation have a long and distant provenance from classical through medieval and Renaissance times to the 20th century, when Jakobson claimed in his seminal article 'On linguistic aspects of translation' that all terminological 'deficiencies' can be rectified by the use of loanwords or loan translations to qualify or amplify an existing term, by neologisms or semantic shifts, or by circumlocutions (1959: 234). This trio is still familiar to professional translators (see Stolze 1999: 38; Bellos 2012: 179) as well as to terminologists (see Arntz & Picht 1995: 163–4) up to the present day.

Looking back over the ways in which new terms were introduced to create new lexical resources, as a terminologist, Wüster (1985/1979: 37) underplays the historical possibilities of neology

and circumlocution in favour of loans: 'Bis zum vorigen Jahrhundert gab es kaum eine andere Möglichkeit, neue Wortelemente zu gewinnen als die Übernahme aus anderen Sprachen oder Sprachzweigen'.[1] He goes on to suggest, however, that in the 20th century, the rate at which techniques such as abbreviation and acronymisation were used to produce new words, that is, neologisms from within the target language, accelerated significantly. Also expressing a terminologically based view, Sager (1997) distinguishes three main 'patterns of term formation', apparently for both primary and secondary term formation: the re-use of existing resources (for example, the terminologisation of general-language words), the modification of existing resources (for example, through morphological means or extension of meaning), and the creation of new forms, including not only entirely new creations but also borrowing and loan translation. Acknowledging the frequently innovative nature of the source LSP vocabulary in scientific texts, Rey notes (2000: 65) that the language of the sciences is in itself particularly characterised lexically by neologisms, borrowings and calques. Other classifications have been proposed for term formation as an exercise in naming new concepts or re-naming known concepts (for example, Picht & Draskau 1985: 106–13; Arntz & Picht 1995: 118–27). And from a translation perspective, Bellos discusses 'three ways of making up a word', namely 'importing' it from the source language ('foreignism'), making up a new compound from existing words in the target language in analogy to the source-language term (calque), or expanding the use of an existing target-language word ('semantic expansion') (2012: 179).

Historically, loans seem to have been one of the most productive methods for filling lexical gaps, although they are far less likely to meet either classical or contemporary prescriptions for new terms (see also Section 5.3 below). Vermeer's typology of translation methods used in OHG, for example, is characterised by the influence of language contact in which he systematically distinguishes many different types of loan. His typology consists of loans based on form; loans based on meaning, including loan translation; 'loan blends'; pseudo-loans, which could be seen as a kind of new coinage; and paraphrases or explanatory translations (Vermeer 1992b: 115–17). Yet another variation on the tripartite theme is offered by Gotti, also in a historical context, this time in 17th century English. He describes a number of possibilities including 'resemanticisation' (my choice of

term not Gotti's), coinage through affixation and compounding, as well as borrowing. He also notes that the use of loans, in which the strong influence of translation was evident, accounted for two thirds of entries in what he calls a 'paradigmatic' dictionary of 'hard words'[2] (2003: 157, 177).

While there is some variation in the proposed classifications discussed here, they all have very similar inventories, albeit with different degrees of elaboration across the three main areas.[3]

5.2.2 Lexical gaps from a terminology perspective

In much of the Terminology Studies literature published in the 1970s and 1980s, the principal narrative was one of regulation and control,[4] certainly in the Wüsterian tradition: how can the proliferation of terms designating the same object, material or immaterial, be prevented? The risk when new terms are created to fill a perceived gap, whether as part of a translation task or when populating a termbase, is that a term – or even terms – already exists but has failed to be identified by any research undertaken. The result is then an increase in synonyms which are not necessarily well motivated, for example, in terms of register appropriate to different author-reader relations, such as expert-layperson rather than expert-expert.

Writing in the 1980s in the context of compiling electronic multilingual terminologies in the oil and gas industry, Stellbrink (1985: 161) issued a dire warning against what he judged to be the unreflected or hasty creation of terms by terminologists or translators to fill gaps which emerge in particular languages. He cites two closely related reasons, including the proliferation of synonyms. The second reason has to do with the integrity of the whole terminology collection; he argues that the presence of 'invented' terminology will impair the quality of all the entries for the user, since it will be impossible to distinguish established from *ad hoc* terms. Stellbrink stresses that in his view the proper authorities for creating new terms are professional associations, although how such work would be coordinated with commercial companies and by whom is unclear.[5] The task would be especially challenging where multilingual work is concerned, with lines of responsibility becoming increasingly blurred. Stellbrink's remarks are, however, likely to have been shaped by other factors such as the slower pace three decades ago not only of communications but also of disciplinary change. Translation turn-around

times were also much slower. The need for regulation in a safety-critical subject field is also likely to have been a major concern.

Termbanks – large organisation-based electronic databases – were indeed seen as one practical way of controlling use by (a) recording preferred and deprecated terms and their associated metadata, crucially definition and domain; and (b) providing a single point of authoritative reference for authors (and in some cases, translators) in order to avoid terminological variation within and between texts. A 'gap' would be interpreted here to mean a missing term/concept in a system of concepts which was intended to represent in a comprehensive way a chosen knowledge space or subject field. In the absence of a term to designate a particular concept, one could be formed and an entry added to the termbank or termbase,[6] or data entry could be postponed until the terminologist had more information. The 'gap' in the inventory of term entries would not create any significant problem beyond the specific missing entry for the resource as a whole.[7]

It was only in the 1990s that attention in Terminology Studies turned to the analysis of terms in text as an object of study in itself, with its own constraints and grammar in which variation could in some cases be seen as functional (see, for instance, Rogers 1997, 1999, 2000). In other words, text began to be seen not as a defective lexical muddle but rather as an artefact of a different kind with a different purpose from a termbank/base in which terms assumed textual functions beyond the referential. Work in Socioterminology has played an important role here (see Chapter 3, footnote 8).

A textual perspective is important, even for terminologists working towards a codified collection of terms in a particular domain, as text is a primary source of data in reaching their goals of mapping the structure of the chosen domain and documenting how this is represented linguistically (or through other types of designation). A better understanding of how texts function can only aid the terminological work of *interpreting* textual data, whether in an original form as running text or in processed form as alphabetical and frequency indexes or concordances. For translators, text has a different status: it is not only their primary source material, it is also their end-product. It is their source material in at least two ways. Firstly, it provides the starting point for the translation as the source text provided by the client. Secondly, translators are increasingly turning to existing texts

in both the source language and the target language to research text-based terminology solutions. This trend has, of course, accelerated in the age of the Internet, when access to digital text provides rich and multitudinous possibilities for terminology research, especially in certain languages with global reach.

Modern-day terminologists and translators therefore have access to both text-based and traditional dictionary-type codified resources when attempting (a) to establish whether there is actually a 'gap' in the target language, and, if needed, (b) to decide how to fill that gap in the target language, whether as an abstracted lexeme in a codified collection of some kind or as a textual solution.

5.2.3 Lexical gaps from a translation perspective

Not all translation scholars accept the notion of 'lexical gap' at face value. Vermeer (1992a: 368ff), for instance, maintains that cultural differences which may give rise to lexical problems in the target text may indeed, if appropriate, be linguistically expressed. But he proposes that gaps may only be identified by *text* recipients in particular situations, where, for instance, the translator has failed to realise adequately the purpose of the target text: 'Im translatorischen Handeln geht es nicht um Feststellung und Füllung eventueller "Lücken", sondern um skoposadäquate Vertextung'[8] (1992a: 373). In other words, translators *have* to fill lexical gaps in texts (see also Kocourek 1981) in a way which is appropriate to the translation task. They can't leave gaps for their clients to fill in later. But it seems to me that this is rather a different point from rejecting the notion of 'gap' all together; it is simply a text-based understanding of a particlar type of lexical problem in translation.

Nevertheless, once a text-based solution has been found by the translator, it cannot be assumed that the first translation solution, perhaps a circumlocution or a loan, will become the accepted norm, particularly over time, or that only one form will turn out to be functionally useful. As we shall see, loans, for example, may be replaced by neologisms diachronically. Moreover, the concept which has created the gap in the target language may itself not be stable or clear, hence the terminological solutions in both the source language and the target language are also unlikely to be stable. Over time, attempts may be made through official and professional bodies, particularly in scientific and technical domains, to standardise both concepts and

terms on an international basis, but premature action may impede development and oversimplify varying perspectives. And the regulation of language use – as in prescriptive terminology – is famously difficult. So gaps, once 'closed' in a particular text, may re-open, partially or fully. But there is a long tradition of 'strategies' on which the translator as a creator of texts can draw. As Chesterman remarks, 'translation strategies' are memes – a meme being basically 'an idea that spreads' – being 'passed on from generation to generation' (2000: 87, 2).

The modern translation literature mentions many 'strategies' for dealing with what is often framed as a problem of 'non-equivalence'. Newmark, for example, lists a total of 14 'procedures', covering both literary and non-literary items, focusing mainly although not exclusively on the lexical level (1988: 81–91). A broader view is offered by Chesterman, also using both literary and non-literary examples to illustrate syntactic, semantic and pragmatic translation 'strategies'. 'Strategies' are understood here as solutions to problems identified in the source text (given the translation brief) which are 'standard conceptual tools of the trade', being 'open-ended and amenable to adaptation, variation and mutation' (Chesterman 2000: 87). Only one of Chesterman's strategies, classified under syntax for some reason, is directly relevant to the problem of lexical gaps in the target language. This is concisely summarised as 'loan or calque', but also includes variations such as 'double presentation' (after Pym), that is, couplets/doublets or the use of 'two procedures in harness' in Newmark's words (1988: 81), and neology or the creation of a word 'fresh from the target language itself' (Chesterman 2000: 95). Stolze's extensive introduction to specialised translation devotes a whole chapter to the topic of neology in target-language lexical gaps, again framed as a problem of non-equivalence, giving detailed advice on formal and semantic strategies for forming specialist terms in English, German, French and Italian, including inventories of morphemes, as well as of terms and phrases (1999: 57–91). Borrowing (*Übernahme*) and loan translation (*Lehnübersetzung*) as well as paraphrase (*Umschreibung*), however, get fairly short shrift (1999: 38). The topic is also dealt with in some detail by Baker (2011: 18–43), although not specifically related to specialised translation. Baker insists on separating typical problems from solutions, that is, 'strategies used by professional translators'. Baker's inventory of problems, 11 in total, include a

culture-specific word in the source text, the lack of a superordinate or a specific term in the target language, and so on. The solutions, which number seven in total, include translation by a superordinate, by a more neutral/less expressive word, by cultural substitution, by a paraphrase, by omission and so on. Not all of the proposed strategies would be appropriate in specialised translation. Terms are, for example, rarely if ever expressive, and omission is not an obvious strategy as terms carry a heavy information load in LSP texts. On the other hand, using a more specific or a more generic term are common ways of solving problems of non-equivalence, or, in other words, of filling gaps in the target *text*, using existing target-language resources (see, for example, the example of *löten* in Chapter 3).

Table 5.1 summarises these different recommendations, focussing on strategies/procedures for filling *lexical* gaps in translation; I have included couplets as this is clearly a *textual* strategy. I have also included circumlocution as a textual strategy, not normally amenable to codification (language-typological features notwithstanding). Borrowing and circumlocution are the most consistently represented strategies in the sources selected for discussion.

In the following three sections I look in more detail, largely from a historical perspective, at ways in which lexical gaps have been filled following the classical tripartite division. The gaps could be the result of a number of factors in the source text, including a culture-specific item which is unknown in the target language/culture, a source-language neologism or a loan from another language in the source language, all of which could occur in a literary text or an LSP text.

5.3 Borrowing

When languages and cultures come into contact, it is quite natural that linguistic changes occur as a result of that contact. The part of language which is most likely to change and to change in a noticeable way is the vocabulary, which is also susceptible to change through internal developments as meanings change and new words or phrases appear to cover new phenomena or reconceptualise existing phenomena. As we saw earlier in this chapter, loans (a source-language perspective on the target-language oriented 'borrowing') have been a very productive means of filling lexical gaps for many centuries.

Table 5.1 Selective summary of translation strategies to fill lexical gaps reported in the Translation Studies literature

Strategy	Textual strategy	Codification strategy	Specific strategy	Newmark 1988	Stolze 1999	Chesterman 2000	Baker 2011
Borrowing:	+	+	loan word: ± orthographic or morphological assimilation	+	+	+	+
Neology:	+	+	coinage: by derivation or compounding		+	+	
	+	+	loan translation	+	+	+	
	+	+	extension of meaning: re-semanticisation/ terminologisation		+		
Circumlocution:	+	–	circumlocution	+	+	+	+
Combining strategies:	+		couplet *aka* 'doublet' or 'double presentation'	+	+		+
	+	+	cultural equivalent	+			+
	+	–	functional equivalent	+			
	+	–	use of more specific or more generic term		+		+

Note: The shaded area shows the strategies covered in classical times.

Translation – through which languages come into very close and considered contact – is a naturally rich source of lexical innovation. Indeed, translators since Cicero have filled translation gaps by transferring the source-language word into the target language, *ubi nostra desunt*,[9] a method also advocated and practised by Quintilian and Pliny the Elder (23–79 CE) (Rener 1989: 99). Such classical authorities provided the basis for legitimising borrowing in later vernacular translation. Kelly reports that borrowing was the commonest source of terminology in the medieval period in translation *into* Latin with scientific terms being imported from Arabic such as 'algebra', 'alchemia' and 'alkali', as well as being a feature of classical translation *from* Latin into Greek (social and legal terminology such as *πατρίκιος* for 'patricius', that is, nobleman) (1979: 135–7). Borrowing was, however, not universally acclaimed as a method of expanding the scientific vocabulary: the English philosopher and scientist Roger Bacon acerbically noted that 'now scientists ha[ve] to know Greek and Hebrew as well as Latin' (reported in Kelly 1979: 135). Borrowing continued into the Renaissance and beyond in areas where no native specialist vocabulary was available, in Medicine, for instance, but not where a standard vocabulary already existed, for example, shipbuilding, according to Kelly: later, so-called 'inkhorn(e)' terms[10] – borrowings considered to be pretentious or poorly motivated – came to be criticised, often for reasons of linguistic purism rather than a desire for clarity, a view which still resonates today. Attempts have been made, for example, to replace Anglicisms in a range of subject fields and languages from Norwegian oil-drilling terminology to Greek IT terms.

What counts as a loan covers at least two possibilities. The word – or in some cases, the expression – can be transferred with or without assimilation to the target-language morphology or orthography (see the German *Lehnwort* as opposed to *Fremdwort*),[11] but this difference is better described as a cline than as an absolute. In languages which inflect for case and gender, articles (where relevant) and modifiers may in any case indicate a degree of assimilation, even if the noun itself remains unchanged. One solution reported by Rener (1989: 101) shows how Luther retained Latin inflections in German as another case-inflected language: *im Evangelio* (Latin noun in the ablative embedded in a German prepositional phrase); *die Worte Sankti Pauli* (Latin genitive attribute dependent on a German noun

phrase). Orthographic assimilation includes transliteration, as would have occurred into Arabic from Greek: following the first step in the borrowing process, transliterated loans were later replaced with neologisms more in keeping with Arabic morphology when the translations were revised some 100 or so years later (Delisle & Woodsworth 1995: 114). Transliteration does not, however, always accompany borrowing. In modern Greek, for example, terms borrowed from English to fill lexical gaps may still appear in the Roman script, particularly in the translations of IT texts, or even in non-translated texts. A transliterated form, also adapted to Greek phonology, may follow some time later, and possibly an attempt to replace this with an existing Greek word whose meaning would then be extended.[12] The following development of the Greek term for 'microchip' illustrates such a case, but also draws attention to the perils of attempts at purism, which may lead to the unwitting use of further loans, themselves the result of a long lexical interlinguistic chain of borrowing. The apparently Greek *πλακέτα* (see Table 5.2) which is used to replace the English-derived τσιπ ('chip'), is itself a loan, possibly from the Italian *placchetta* (or less likely the French: *plaquette*), in turn from the Latin *planca,* based on the Greek root *πλάκ(α)* a marble slab on a grave).[13]

Within Translation Studies, borrowing is seen by some authors mainly as a strategy to convey so-called 'cultural words' whose referent is specific to the source language (for example, Newmark 1988: 81–2; see also Kelly 1979: 135 for administrative terms in classical languages). The example of 'ombudsman', borrowed from the Swedish but now well established and integrated into English, shows how a legal term can make this transition in modern English (Arntz & Picht 1995: 163). A historical example of culture-specific

Table 5.2 Possibilities for filling the lexical gap for 'microchip' in Greek

Chronological development	**Greek equivalents for *microchip***
untransliterated loan	microchip
transliterated loan	μικροτσίπ
semantic extension of LGP word	μικροπλακέτα

Source: Reproduced from Rogers (2006b).

words which presented problems for the translator can be found in Landino's 15th century translation of Pliny's *Naturalis historia*, in which he had to face 'the arduous task of finding Tuscan words for a variety of items which belonged to the Roman way of life' (Rener 1989: 100, footnote 6). In other cases of what Newmark calls 'semi-cultural words' – which seem to be terms: 'maximalism', 'Enlightenment', Heidegger's *Dasein* – borrowing, at least on its own, is, for reasons of transparency, not recommended (Newmark 1988: 82). Instead, some kind of couplet is preferred, combining 'transference' (borrowing) and another translation procedure such as providing a functional equivalent, for example, '*baccalauréat* – "the French secondary school leaving exam"' (1988: 83). The comprehensibility of borrowed and newly coined terms to the target readers was also a concern for classical and medieval translators, who are likewise reported to have used couplets to meet the requirement of clarity (see Kelly 1979: 136; Rener 1989: 104; Vermeer 1992b: 109; Gotti 2003: 161–2), thereby introducing and explaining new terms, in Latin and later in the vernacular languages.

Just as today there is often some political resistance to borrowing terms to fill translation gaps, particularly from a global language such as English into languages of lesser diffusion (notably those which are subject to official planning such as Icelandic), so too could resistance be detected in earlier periods, either as a result of concern for the reader or out of more linguistically purist motivations (see Kelly 1979: 137–8; Rener 1989: 103). The use of couplets, as we have seen, a popular way of introducing and establishing a borrowed term in texts, meets the target-language reader's need for clarity but not those of the linguistic purist. In this case, neologisms, which are created language-internally, have often been the preferred solution, at least in theory, if not always in practice.

5.4 Neologisms

'Neology' is itself a problematic term. Neologisms can be thought of simply as newly invented words – sometimes known as 'coinages' – such as the English base morpheme in '*mosh*ing', meaning 'the frenzied energetic dancing engaged in by speed metal fans' (Ayto 1989). Alternatively, neologisms are said to include loans and loan translations, as well as coinages (see Sager 1997), or indeed any

newly formed linguistic expression, including the lexicalisation of abbreviations and acronyms, the re-use of existing resources through word formation, and what could be broadly described as semantic loans (see Bussmann 1996: 324). We will follow here the classical view of filling lexical gaps in translation which separates borrowing (in the narrow sense of loan words) from neology (*verbum e verbo* and *verbum e sensu* after Rener 1989: 104ff, that is, loan translation and other semantic loans). So neologisms are understood here as either completely new formulations, which is rare, or more commonly, words newly created in the target language using the resources of either the source language (for example, loan translation) or the target language (for example, compounding, derivation, extension of meaning). In practice, however, it is on occasion difficult to distinguish between source language and target language as sources, owing to the high degree of linguistic integration between, say, English and (ancient) Greek, Latin and French (Sager 1990: 79), as the example of 'microchip'/ *μικροτσίπ* / μικροπλακέτα has shown.

In primary term formation, neologisms are often created through extending the meaning of an existing word or term, or through word formation. These possibilities cover a broad range: neology may be inspired by literature through the re-use of nonsense words, or controlled by a nomenclature. Among the least systematic seem to be terms based on literary sources, such as Murray Gell-Mann's famous 'quarks' (James Joyce's *Finnegan's Wake*) (Ahmad 1998) or Mermin's 'boojum' (Lewis Carroll's *The Hunting of the Snark*) (Pavel 1993: 26), both terms adopted in Physics, which seems to share with literature the need for a creative imagination, presenting problems for both the literary and specialised translator.[14] Most systematic on the other hand are the internationally regulated nomenclatures of some physical sciences such as Chemistry, although even here, despite over a century of activity, problems of consistency and transparency have been reported to remain even after decades of work (Godly 1993).

When shifts in meaning are used as another way of enriching the vocabulary of a language, the meaning of a word is expanded or 're-semanticised' – commonly through metaphorisation – such as the adoption of the avian 'tweet' and 'twitter' in the fast-changing world of social media. Metaphorisation often means the appropriation of a general-language word or expression for special purposes, a process of terminologisation (recalling Sager's 'double duty', 1990: 19). Common

examples here include IT terms such as 'window', 'platform', 'recycling bin' and terms in Physics such as 'work' and 'force' (see Savory 1957: 142). Other special languages can also serve as a source of terms through metaphorical extension, for example, 'virus' from Microbiology to IT. Similar strategies are also available in translation if lexicalised metaphorical terms from the source language remain without an equivalent.

As well as new meanings, novel forms also emerge within a language, often by analogy with existing expressions particularly in popular use, such as 'ear candy' for designer ear phones (cf. 'eye candy', 'arm candy') and 'bridezilla' (cf. Godzilla) for bossy brides, or even 'twitterati' by analogy with 'glitterati', itself a neologistic blend of 'glitter' and 'literati'. English-language dictionary publishers even use the entry of new words and expressions in their latest edition as a marketing ploy. The *Oxford English Dictionary* (*OED*), for instance, announces quarterly updates which are often reported in the national press; recent editions (March 2014) include 'bestie' (best friend) and 'chugger' (a blend from 'charity' and 'mugger' to denote a person stopping pedestrians to solicit charity donations). The *OED*'s word of the year in 2013 was 'selfie' (a photo of oneself usually taken on a mobile phone), which has already precipitated 'drelfie' (drunk self) as well as other less printable formulations.[15] All these words would present problems for translation by analogical word-creation, as the word-play element would be hard to maintain.

The playful element which is evident in these examples is less likely to be found in the development of primary terms in LSP vocabularies, particularly in the case of expert-to-expert communication, as entertaining the reader/listener is not a primary communicative function. Nevertheless, ludic elements which are formed by analogy can be identified in some science texts. In the domain of Biology, for example, Ureña Gómez-Moreno[16] reports on the anthropomorphic introduction of new terms in the special language used to describe fish-schooling behaviour by analogy with terms from Economics, such as: 'Homo Economicus' (Economics) → 'Pisces Economicus' (Biology); 'selfish economic man' → 'selfish fish'; and 'invisible hand' → 'invisible fin'. The motivation for such playful choices is said to be to capture the reader's attention and to aid memory by reinforcing metaphors chosen to support the understanding of new concepts.

From the perspective of secondary term formation for translation purposes, there is likely to be a wider range of sources for neologisms than in primary term formation. While target language-based methods such as re-semanticisation (or more specifically terminologisation of general-language words), derivation and compounding are available as mechanisms of secondary as well as primary term formation, the influence of the source language is likely to predominate in translation contexts, at least initially.[17] The use of loan translation or 'calque',[18] for example, has been widespread through the centuries: in the absence of a word-for-word equivalent, the translation problem was downshifted, often to avoid loan words. In order, for instance, to minimise borrowings from the Greek, classical Latin translators are reported to have converted each part of Greek words for which there was no equivalent in Latin, for example, *periodos* ('rhetorical sentence': *peri- '*about'; *odós* 'walk') became *circuitus* or *ambitus* (*circum* or *amb '*about'; *ire* 'walk') (Rener 1989: 104).[19] As noted earlier, such confections were not always enduring, either for Cicero, whose terms were eventually replaced by the assimilated loan *periodus*, or for later less distinguished practitioners of the purist's art such as the 19th century German Postmaster-General Heinrich von Stephan (as reported by the German philologist C.J. Wells) who attempted to replace 765 loans (often from French) in post-office usage. His purist aims were to be achieved through loan translations, for example, *Fernsprecher* for *Telephon*, and semantic transfer within German, for example, extending the 18th century meanings of *Postkarte* – 'map' and 'ticket' – to cover *Korrespondenzkarte* (Wells 1987: 397–8). The unenvisaged outcome was a kind of functional synonymy in which many of the neologisms proposed by van Stephan now serve only as bureaucratic terms (for example, *Anschrift*) alongside the popular French-derived alternative (for example, *Adresse*). Such could also be the uncertain fate of source-language loans replaced by neologisms (by form or meaning) in translation.[20]

Calques are, nevertheless, still a common solution in specialised translation, perhaps for expedient rather than considered reasons as advised in best terminology practice, according to which calques are recommended only if the source-language term is well motivated, for example, 'contact lenses' (en) → *Kontaktlinsen* (de) (Arntz & Picht 1995: 172). Even then, the resulting target-language term may be unhelpful, as in the case of the erroneous Norwegian formal calque

trøstplate (back-translation: 'consoling plate') for the automotive term 'thrust plate', later to be replaced by the more successful sense-based calque *trykkplate*.[21] Other anomalies arise where two different scripts are concerned: eponymous terms may result in a hybrid orthography as with the following medical term in Modern Greek: *κρίση τύπου Jackson* (back-translation: 'seizure of-type Jackson', that is, 'Jacksonian seizure').

The target language is an equally rich source of neologisms, whether through the introduction of polysemy (for example, the assignment of a technical meaning to the Latin *acidus* meaning 'sour', Kelly 1979: 135) or less commonly the creation of a new form, for example, 'moof', a primary term meaning hacked software for Macintosh computers: 'I've been moofed' (I've been been disconnected by the system).[22] The former, that is, terminologisation, seems to have been particularly productive. Pavel (1993: 23–4) claims that 'semantic neologisms' predominate over formal neologisms in the evolution of scientific terms, whether primary or secondary. One salient example of this technique is provided by a study of the astronomical nomenclature developed in classical Rome and reported by Montgomery (2000: 38): this consisted in assigning specialist meanings to common Latin words selected according to whether they might 'act as an equivalent to the Greek model',[23] the popularising aim being to make the terms 'immediately accessible to the average educated Roman' (2000: 39). Montgomery notes a general tendency amongst Roman intellectuals to exclude 'the more advanced works of Hellenistic science', possibly because of the perceived superiority of 'social action' or 'praxis' over theory (2000: 35). Decisions about how to fill lexical gaps may therefore be seen as being sensitive to the purpose of the translation: in this case, to make the text accessible to a broad audience, not only through the choice of text but also through the formation of new vocabulary. A much later (and not isolated) example of introducing semantic neologisms is provided by Kepler, the German mathematician: he favoured the re-use of words from nature and the environment in his translations into the German vernacular. So instead of the Latin-based *Segment*, he introduced *Schnitz*, a segment of an apple or orange. He was then able to build on this to form compounds indicating different types of segment according to shape, such as *Zirkelschnitz*, *flacher Schnitz*, and *Kegel-* or *Kugelschnitz* (Fluck 1985: 30–1). In a translation context, initiatives of this kind,

that is, using the resources of the target language, have the potential, as Kepler demonstrated, to introduce a transparent system of terms, in which generic-specific and co-hyponymic relations are explicitly represented. However, some recent studies have highlighted some of the complexities not only of designation within a term/concept system which proves to be dynamic, but also of too narrow an understanding of the functions of neologisms simply as denotative (in dictionary/termbank/termbase entries) or referential (in texts for communicative purposes). Some examples follow of both these cases.

In a study of neology in specialised languages, Roldán-Vendrell & Fernández-Domínguez (2012) distinguish between what they call 'emergent neologisms' and 'complementary neologisms'. In the first case, a new term emerges with a referential function for a new reality, that is, to fill a 'gap' for an innovative concept; in the second case, another new term is then needed 'to fill the lexical gap generated by [the] emergent neologism' (2012: 15). Working in the subject field of modern olive oil agriculture in Spanish, they give the example of *olivar de regadío* ('irrigated olive grove') as an emergent neologism which captures the new cultivation method of irrigation. But what about those olive groves which still lack irrigation? The terminological solution which they propose is to introduce a second neologism to complement the first – *olivar de secano* ('non-irrigated olive grove') – with the original term *olivar* ('olive grove') now serving as the hyperonym (2012: 15). What they describe is the well-known phenomenon of retronymy (see, for instance, Ahmad & Collingham 1996). Whatever such consequential terminological changes are called, this understanding of 'gap' is system-related.

A different and more novel perspective relating to the pragmatic aspect of terms is presented by Pecman (2012). She considers neology[24] from a functional point of view: what do neologisms do and how are they used, specifically in the discourse of science? Using a corpus-based analysis of texts in the field of Earth and Planetary Sciences, she argues that the naming function of neologisms is sometimes overridden by a rhetorical function through which scientists aim to emphasise the originality of their work, that is, as 'new' rather than 'given'. By associating different terminological variants with particular locations in the corpus of scientific papers (Title, Abstract, Keywords, Introduction, Methods, Results, Discussion, Acknowledgments), Pecman concludes that the 'unpacking' of fixed

nominal groups (that is, terms) as more extended phrases – for example, 'hydrothermal plume release' which then becomes 'release of hydrothermal event plumes' – can serve to make 'what appeared to be an established concept at first […] a novelty, discovery or proposition for a new paradigm in the realm of conceptual knowledge' (2012: 52). Crucial to her analysis is Halliday's study of variation in science writing,[25] understood as grammatical metaphor, according to which the writer's sequential choice of different word classes to represent a certain scientific phenomenon – from verbs to adjectives and nouns – reflects the evolution of the idea towards the more concrete (see also Section 3.3). Whilst Pecman's data are understandably limited given the problems of manually identifying low-frequency terminological variants, more detailed work on the textual role of terms in relation to their claimed rhetorical role would be welcome, for example, across different genres such as popular science and science writing. The broadening of communicative functions fulfilled by neologisms certainly adds weight to the view that the objectivity of science writing cannot be assumed. Unless specialised translators are aware of such communicative nuances, these may well be lost in translation, overridden by considerations of consistency, so that the translator repeats the equivalent target-language term for 'hydrothermal plume release' instead of varying the phrase in favour of the equivalent of the more extended and, according to Pecman, more novel 'release of hydrothermal event plumes'.

There is therefore considerable uncertainty for the translator in knowing how to deal with source-text neologisms, not only as new terms in themselves but also in their textual variations. But even in dealing with source-text neologisms which are clearly recognisable as terms – for example, according to their form as a new compound – the translator still faces a difficult decision. Newmark (1988: 149), for instance, sensibly advises against translators creating neologisms in 'non-literary texts' unless they have 'authority', or unless they create it out of 'readily understood Graeco-Latin morphemes'. Specifically, '[i]n technology, [the translator] should not usurp the terminologist' (ibid.). In relation to the problematic terminologised nonsense word 'boojum', Mermin (1981) notes that in the case of both French and Russian, the English term was transferred, with the Russian undergoing some assimilation through transliteration and inflection. By contrast, in literary texts 'it is [the translator's] duty to re-create any

neologism […] on the basis of the SL neologism' (ibid.). It is hard to imagine, however, how this could be achieved with neologisms such as 'selfie'. Newmark's solution in the non-literary context is to use a paraphrase (although he dislikes the term) together with a translator's note to the client reporting that the source-text term could not be found. Newmark was writing in 1988, prior to the widespread use of the Internet, when the opportunities for winkling out existing terms were significantly fewer. Such a note would not be so acceptable today.

All in all, a number of social, political, domain-related, rhetorical, and last but not least, linguistic factors may influence the translator's decision about whether to create a new term in the target language, or to borrow or calque a term from the source language. Such factors include language prestige, nationalism, and furthermore the genealogical relationship between the source language and the target language. Calques may be preferred as a form of neologism over borrowings, for instance, where the source language and the target language are from different language families, as was the case, according to Rener (1989: 104–7, 111–12), in translations from Latin into German, a non-Romance language: the fragments of a 15th century 'rudimentary translation' of Aelius Donatus's seminal 4th century grammar, which became a standard textbook for over a thousand years (see also Collison 1982: 183), introduces a number of terms based on Latin, none of which, however, seems to have survived into modern German, for example, *vorseczung* for *prepositio*, *für nam* for *pronomen*. These very literal calques gave way – so Rener tells us – later in the 17th century, following the practice of Cicero to replace *verba e verbo* with *verba e sensu*, to German terms based more on the sense of the original Latin terms than their form. For example, for didactic reasons Ratichius (Ratke) is said to have proposed *Sprachlehre* for *grammatica*, and *Wortschreibung* for *orthographia*, but the philologist and poet Schottelius (1612–1676) later proposed *Sprachkunst* and *Rechtschreibung* respectively (Rener 1989: 105–6). All have survived to the present day with *Sprachlehre* and particularly *Sprachkunst* each having acquired a less specialised sense, and *Rechtschreibung* being used for the officially agreed variants of *Wortschreibung*. Rener further tells us that where the sense of the neologism was thought to be obscure for the intended reader, the now familiar technique of creating a couplet (for example, neologism + loan) was also favoured (1989: 107, 222).

The creation of new terms in French based on original Latin terms may be thought a deal easier than in German, since terms could be formally integrated through simple morphological changes, according to Rener (1989: 104). In their translations not only of Greek but also of Latin texts, the medieval French translators Pierre Bersuire (c.1290–1362) and Nicolas Oresme (c.1320–1382) coined many new terms fashioned after the source language, many of which are still familiar today: *auspices*, *sénat*, *aristocratie*, *démagogue*, *langue maternelle* (Delisle & Woodsworth 1995: 36–7). However, such neologisms, still lacking transparency for the intended readership even if of Romance origin, gave rise to the need for glossaries appended to the translation or for 'in-text' strategies such as couplets. Again, it is unclear what forms such glossaries took.

This section is concluded with a contemporary example which illustrates how a set of new terms is generated in one language (English) creating a 'word family' in a specialist domain, which then leads to a new term in the contact language (French). During the building of the Channel Tunnel between the UK and France during the 1980s and early 1990s, communication happened through both English and French, also with the support of translators.[26] During this time, new terms started to emerge in English based on established terms – and then in French – to suit the narrowly defined communicative needs of the work teams, with respect, for example, to linguistic economy. So through a series of morphological changes, and then a shift in word class from noun to verb, followed by borrowing into French, a new verb *fatter* ('to apply a Factory Acceptance Test') emerged. It seems, however, that this French neologism remained very much an in-group term which disappeared when the communicative situation ceased (Table 5.3).

Table 5.3 The diachronic emergence of terms in English and French

English	Factory Acceptance Test	*original term in English*
	FAT	*abbreviation*
↓	FAT (used as noun)	*abbreviation replaces full term as default*
	FAT-certificate	*compounding*
	FATed (used as verb)	*change of word class*
French	fatter (fr. verb)	*transfer and assimilation into French*

5.5 Circumlocution

'Circumlocution' (Rener 1989: 108–9: *pluribus verbis*) signals a move from a single-word 'term' to a phrasal expression with 'no strict form'. But for Rener, 'circumlocution' can range from compounds (what today could, for instance, be called multiword or multicomponent terms) to couplets, thereby crossing traditional boundaries between terms and pre-terms or explanatory phrases. With respect to multiword terms, the classical perspective is lexicological (based on the word) rather than terminological (based on the concept or 'category'). In Terminology Studies, multiword terms such as 'haploid life cycle' (Cell Biology) or 'myocardial infarction' (Cardiology) are not usually considered as collocations but as lexical units. In the classical model, one source-language term which is translated by two or more target-language words would be classified as a circumlocution. So, strictly speaking, the English translation of the German automotive term *Katauto*, that is, 'cat car', would be a circumlocution. But in such cases the shift from one to two words simply results from language-typological differences and is not a matter of translator choice: it is the appropriate language-specific form in compliance with the ISO principle of linguistic correctness, in this case of a loan translation. Explanatory or descriptive phrases such as 'car fitted with a catalytic converter' would more clearly match the spirit of what seems to be understood as a circumlocution. Kelly (1979: 136), for instance, notes the use of this procedure to fill terminological gaps, giving the example of a Renaissance translation of Euclid's term αμβλυγώνιος ('obtuse-angled') into Latin, critically but rather unfairly remarking that he regards the chosen solution – *qui obtusum habet angulum* ('which has an obtuse angle', *my translation*) – as avoiding the problem.

More approvingly, and writing with terminology in mind, Arntz & Picht (1995: 164) link what they call an *Erklärungsäquivalent* – an 'explanatory equivalent' – with components of a potential definition, for example, 'denuclearization' (en): *Schaffung von kernwaffenfreien Zonen* or *Errichtung von kernwaffenfreien Zonen* (de) ('creation/formation of nuclear-weapon-free zones'). Certainly for textual purposes, it may be useful to think of a cline of 'terminess' rather than binary categories of term/non-term, moving from standardised, fully defined terms, through frequently used but fuzzier terms, to

paraphrases, which in some cases could be thought of as pre-terms, or, depending on the morphological structure of the language, even as terms (see Rogers 2002). Points on such a cline are sometimes even directly represented in texts, as we can recall from Pecman's functional analysis of term variants, and Halliday's audience-oriented analysis of a popular science article (see Chapter 3). A similar textual progression is demonstrated in the following journalistic examples, as the key idea is introduced for lay readers in the form of a proposition, then condensed into a nominal phrase:

> around a third of asylum seekers apply at their port of entry → 'at-port applicants'
> the rest enter on tourist, student or business visas and apply once they are in Britain → 'in-country applicants'

These examples show how circumlocution or paraphrase can also be used intralingually for explanatory purposes for reasons of accessibility to a less-specialised readership, preparing the ground for the more condensed and therefore economical specialist term.

Paraphrases therefore help to prepare the reader's way for the term as a kind of explanation before the fact (see von Hahn 1983: 93–4). This strategy is also to be found, arguably in a more considered form, in texts such as public information leaflets where specialist knowledge cannot be assumed but where understanding is essential for democratic reasons. When the politically infamous UK 'poll tax' (officially known for ideological reasons as the 'community charge'[27]), a local per capita tax designed to replace the former property-based tax, was introduced in 1989–1990 by the British prime minister Margaret Thatcher, the leaflet published by the Central Office for Information used paraphrase as a way of introducing tax-related terms to a very broad readership (*emphasis added*):

> **Who will get help with their community charge?**
> Most people on lower incomes will be able to *get help* (called a *rebate*) with their bills.

Similar examples are to be found in translations where a borrowed term, for example, for a culturally specific item or a or new formation, is considered to need explanation. The imported term often

precedes the explanatory paraphrase, serving as a kind of functional equivalent, as in Newmark's cultural example: 'National Trust, *organisation chargée de la conservation des monuments et parcs nationaux (britanniques)*' (1988: 100). This kind of circumlocution can be seen as a method of meeting the classical requirement of clarity with loans and neologisms, supplemented by a couplet (*duplicatis verbis*) (Rener 1989: 110, 222), as also proposed as 'an aid to comprehension' in the contemporary ISO standard (ISO 704 2009[E]: 41) and in many other sources (see also Chapter 4).

A different kind of couplet has been used in a scattergun way to cover the semantic range of a source-text term whose meaning may not be entirely clear in context. Hence, Rener reports Cicero's translation of the Greek *aitia* with *culpa et causa* and Schottelius's use of *Phrasis oder Redart* (1989: 110, 107). A less generous view attributes this expedient strategy to the translator's lack of precise understanding of the source text, in other words, it is a kind of double indemnity insurance, which can also be observed in legal language aimed at covering all eventualities by pairing words of different linguistic origins as 'mixed language doublets' (Bhatia 2010: 16), for example, 'goods and chattels', 'null and void', 'will and testament'.

Historically, circumlocutions, as opposed to borrowing or neology, are less likely to have been used in the translation of texts from scientific and technical subject fields, where 'both precision and brevity [are] essential' (Rener 1989: 108) than in more culturally bound fields such as Law, Politics, Government, Education and so on, where each system may be language- and country-specific. In cases of culturally bound terminology, it is not just the term which is missing in the target language. It is also the precise concept, along with its relations to other concepts in the field. Hence, the British Higher Education concept of 'mature student' does not exist in the same way in the German university system, where it was traditionally quite normal for students not only to start studying later but also to study for many more years than in the UK. Arntz & Picht (1995: 178) give the example of *divorce pour rupture de la vie commune* from French Law, whereby a six-year separation or a six-year mental illness of one spouse are grounds for divorce, a possibility which does not exist in German Law. As an equivalent, they propose a structure closely following the French but which is untypical of German legal terms: *Scheidung wegen Aufhebung der ehelichen Lebensgemeinschaft*.

This fills the lexical gap in German when talking about the French legal system, but does not necessarily fully fill the conceptual gap as the underlying system of concepts and the system of terms to which this phrase relates are absent. In a text, further explanation may be required (see also Rener 1989: 223).

It was pointed out in Chapter 3 that LSP designations, that is, terms, can take many forms, often dependent on language typological characteristics. Examples were given from English, French and German. Another interesting case here is that of modern Greek, in which periphrastic structures may correspond to much more condensed English compounds. For example, the genetics term 'gross deletion' has as its Greek equivalent the much more explicit and explanatory *αδρές απώλειες μέρους χρωμοσώματος ή τμήματος του DNA* ('substantial losses of a part of the chromosome or part of the DNA') (Florou 2009). However, it seems that the periphrastic structure of many Greek terms may be giving way – arguably under the influence of English – to the greater use of inflection to create more compound-like multiword structures.[28]

One of the problems which circumlocutions present from a terminological point of view is their restricted suitability for extending the specialist vocabulary, one of the principles proposed for term formation (derivability and compoundability). This is particularly important for a language which is developing specialist vocabularies for translation purposes. Antia's example of a proposed Efik term for the English legal term 'bill', which the Efik equivalent glosses as 'law that is yet to bind', poses problems for the establishment of compounds equivalent to 'public bill', 'public bill petition', 'public bill petition office' and so on (2000: 198).

Finally, as already noted, circumlocutions present more difficulties than loans or neologisms for representing concepts in terminology collections, because these expressions are rooted in texts. Even though the translator may have succeeded in filling the *textual* gap, the terminologist is still faced with the challenge of disentangling the circumlocution from its embedding in particular syntactic and textual structures, as well as defining its boundaries, a problem for some multiword terms as well as more loosely constructed phrases. Although the technique of using several words to close a lexical gap in the target language is reported by Rener to stretch from Cicero's Latin translations through medieval and Renaissance

vernacular translations, its use as a way of filling lexical gaps is less well documented than either borrowing or neology, which lend themselves more readily to systematic representation. What is well documented, however, is the use of phrasal expressions to accompany and explain a target-language neologism or a loan word imported into the target text in a way which aims to make the meaning of the new term transparent to readers when it first appears. Used in this way, circumlocutions can, as we have seen, be viewed as an in-text solution to problems of terminological gaps, of explaining 'hard words'; the alternative of appending a glossary (see Chapter 4) to a text has also been noted.

5.6 Conclusion

The history of terminology practice is at the root of the history of translation, in so far as much of this history is concerned with the comprehension and eventual translation of specialised texts that set early glossists and translators terminological problems. Specialised translation can therefore be said to have a long history that is highly informative concerning developments in the practice of and ideas about translation. The criteria and solutions proposed since antiquity for choosing words in the production of a new text, that is, a translation, have also been shown to permeate the criteria for term creation for standardising purposes. The three methods for filling terminological gaps in the target language – borrowing, neology and circumlocution – have been discussed from the point of view of both translation and codification. The problems have been shown to be complex, the solutions various. Circumlocution, or periphrasis in particular, plays different roles, from established term through textual expedient to explanatory part of a couplet, for reasons of comprehensibility.

To return to our starting point in this volume, the relatively low prestige of LSP texts (what Newmark has rather narrowly called the extra-linguistic dimension of 'facts' about the world) compared with that of belletristic texts (the world of the imagination) has influenced the priorities of those writing the history of translation to the detriment of LSP texts, although these have arguably been more numerous (see Vermeer 1992b: 150, 273; Kalverkämper 1993: 215; Shreve 2000). But from a lexical point of view such characterisations

are misleadingly clear-cut: religious texts and even imaginative texts also contain specialised expressions or terms, for which a solution of some kind must be found in the target language. We can also recall that scientists have drawn on the world of literature for terminological inspiration, and that terms and their variants are used in some LSP texts for textual, ideological and rhetorical, rather than purely denotative reasons.

It has been one of the aims of this chapter, and the previous chapter, to collect together and present many disparate sources concerning terminological issues, particularly in translation, which, when combined and linked provide a comprehensive account of many of the ideas on which modern-day specialised translators still draw and of the important role which specialised translation has played not only in the transfer of knowledge but also in its shaping, through the ways in which it has been lexically communicated.

6
Concluding Remarks

Over 30 years ago, an early pioneer of 'translation theory', Peter Newmark, remarked that '[a]ll kinds of false distinctions have been made between literary and technical translation', and that '[a] traditional English snobbery puts literary translation on a pedestal and regards other translation as hackwork, or less important, or easier' (1982: 5–6). For Newmark, the issue is not one of genre or subject matter, it is one of writing quality, which in his view 'cuts across' the supposed distinction between literary and what I take to be non-literary translation: for him, writing is either 'good' ('careful, sensitive, elegant') or 'bad' ('predictable, hackneyed, modish'), regardless of whether the text is 'scientific or poetic, philosophical or political' (1982: 6).

In this volume I have followed in Newmark's footsteps by setting out to show that the negative label of 'non-literary' translation, used to refer to LSP or specialised translation, masks not only its long history of development but also the complexity of the decision-making space which the LSP translator as agent can inhabit. Moreover, a negative can be seen as the marked item of any pair. In the case of literary and 'non-literary' translation this can be regarded as rather odd, given the communicative global importance and volume of specialised translation. I have also argued that this negative designation misrepresents the field of translation in both theory and practice as a binary which excludes shared concerns and practices, some differences notwithstanding as outlined in the first chapter of this book.

Specialised translation touches us in both ordinary and extraordinary aspects of our lives. We encounter many translated texts in the

M. Rogers, *Specialised Translation*

tasks which define our routines and fill our leisure time. These texts help us to perform various daily tasks online, at work and in our homes: to obtain services and information, to fill in forms, to build furniture or use the latest electronic gadget, to use social media, to book flights and hotels, to place orders, to make complaints and so on. But there are also translations that affect our lives much more deeply. The contribution of translators (and interpreters) to our health, our human and civil rights, our well-being and safety in situations of crisis, conflict, or disaster is inestimable. Public-service translation in law courts, police stations, prisons, hospitals, welfare services and so on provides access not only to 'texts that would otherwise be incomprehensible', as Bassnett remarks (2014: 169), but more importantly to information and services that would otherwise remain beyond the reach of those affected. In the case of natural disasters such as earthquakes or tsunamis, for example, information is often urgently needed in many languages: following the 1995 'Great Hanshin Awaji Earthquake' in which over 6,000 people died, 'many foreigners who could not understand the Japanese language experienced great difficulty in finding refuge or in obtaining goods for survival in the disaster area' (Hasegawa et al. 2005: 266). Even if we are fortunate enough to avoid natural disasters, we all need healthcare at some point in our lives. A medically-based study conducted in the United States (St. Hilaire 2005) on behalf of the New Hampshire Advisory Committee to the US Commission on Civil Rights explicitly notes that 'barriers to health care […] may constitute discrimination by national origin' (2005: 8), citing many cases where '[f]ailure to provide interpretation and translation services' had led to 'adverse outcomes', including unnecessary medical tests, errors in prescribing and denial of service (2005: 1). It is precisely, however, these kinds of translation services – those related to public services – which come under financial, and often political, threat.[1] Certainly, research into public-service translation and interpreting has grown considerably in the last decade, a trend which is likely to continue, thereby further refashioning the research profile of Translation Studies for the 21st century, and, it is to be hoped, providing an evidential base for policy formulation. But there is also scope for research into the role of translation in emergency situations, offering good opportunities to adopt an interdisciplinary problem-centred approach from within the Translation Studies community, with implications for training. In general, there is

a dearth of studies asking what the cost is of *not* translating material, or of translating it badly, even in relation to business and commerce.

Many of the examples discussed in this volume have related to terminology as a key but not uniquely defining feature of specialised languages, reflecting their subject-related nature. But even within what could be regarded as a potentially narrow remit, I hope to have drawn attention to a number of issues which resonate with contemporary concerns in Translation Studies, often stemming from literary studies and the cultural turn of the 1980s. These issues include the role of ideology in terminological choice, a sense that specialised translation is re-writing, especially but not exclusively when the subject matter is science, an awareness of the intended readership of the new text, and a weakened concept of source texts as entirely original and stable artefacts. In all this, it is clear that the specialised translator, as the literary translator, is an interpreter of texts, making decisions at all levels of language, from the morphological to the pragmatic, and taking into account issues of culture, not only in that branch of the language industries known as localisation, but also in relation to text organisation and expected degrees of audience orientation in a range of genres. The specialised translator is therefore as much an agent as the literary translator, solving problems, sometimes using the same methods and strategies. The problems may not always be the same – although I hope to have shown that some are shared – but the fact that the specialised translator inhabits a decision-making space is indisputable. Of course, the problems presented by some LSP texts are far greater than those presented by others. But not all literary texts are highly creative: they also range from the banal to the ground-breaking.

The versatility of specialised translators has been discussed here in at least two respects: the need to be knowledge researchers, and the modulations required for writing in different genres. The risks of treating specialised translation as content-free by assuming that any specialised translator can tackle any subject matter, are well known, at least within the profession and amongst those who train translators. But, as we have seen, the literary translator can also be caught unawares by the unpredictable occurrence of specialist terms, as their professional profile does not normally include a domain specialisation. So in a particular text, their terminological challenge could be even greater.

'LSP text' is actually a convenient label for a very wide range of genres covering innumerable subject fields, although discussions of specialised translation often constrain these to subject fields such as Information Technology and genres such as manuals. Whilst some LSP varieties are certainly of limited functionality, syntax and vocabulary, such as SEASPEAK (Gotti 2003: 281ff), we should remember that the whole point of such controlled languages – sometimes written, sometimes spoken – is to avoid a communicative Babel in multilingual communities, often where safety is an issue. When the whole spectrum of LSP communication is reviewed, however, a wider set of functions can be identified than in literary translation, which is always expressive. The voices of literary translation are those of the original authors; the voices of specialised translation are those of the genres it encompasses.

The rather dismissive label of 'commercial' translation – on occasion the chosen counterpoint to 'literary' translation – belies the connecting threads which have been shown to run through the history of translation, frequently focused on subjects concerned with human curiosity about the world and the cosmos or with issues of physical and spiritual well-being. Even the classical principles of writing, specifically word choice, have been shown to be echoed two millennia later in the principles of term formation.

In this volume I hope to have countered the view of 'non-literary' translation as the dogsbody of the professional and academic worlds, and to have established a case for regarding it as a 'serious enterprise'. In this, my own enterprise, the proposal to shed the negative tag is more than a re-labelling exercise: it is also an attempt to explore borders and shared concerns as well as to blur inflexible binary classifications. In so doing, I am invoking the spirit of the German Romantics. In contrast to the rational approach of the writers and scholars of the Enlightenment, they placed great value on the liberating possibilities of nature, such as the transitional periods between darkness and light at the opening and the closing of the day, times at which our perceptions change and in which the imagination can flourish. As the German terms *Morgendämmerung* and *Abenddämmerung* explicitly reveal, these transitional periods exhibit a conceptual similarity. But this is lost in the English terms 'dawn' and 'dusk', revealing a different perspective and therefore presenting a potential problem in translation, both literary and specialised.

Notes

1 Introduction

1. As summarised on the book cover.
2. The scope of the current multilingual challenge is highlighted by a 2014 decision by the European Court of Justice to allow individuals on the basis of their right to privacy to seek the deletion of search-engine links to webpages on which they feature: as one very well-known search-engine company pointed out, handling takedown requests is 'logistically complicated not least because of the many languages involved'. As reported by Charles Arthur, Technology Editor of *The Guardian*, 16 May 2014 ('Hundreds signing up to be "forgotten" after Europe ruling').
3. See, for instance, just a few of the recent Calls for Papers: the Second International Conference on Economic, Business, Financial and Institutional Translation, May 2014, University of Alicante, Spain; IV International Conference, Translating Voices, Translating Regions: The Role of Interpreters and Translators as Mediators in Situations of Sudden or Continued Emergency, October 2014, University of Durham; Translation Research for Industry and Governance, December 2014, Centre for Translation Studies, Leuven.
4. For example: QUALETRA on quality in legal translation (JUST/2011/JPEN/AG/2975, led by the University of Leuven, Antwerp, Belgium); QUALITAS led by the University of Alicante, Spain (Assessing Legal Interpreting Quality through Testing and Certification, DG Criminal Justice Action Grants); and the AVIDICUS projects led by the University of Surrey, UK (Assessment of Video-Mediated Interpreting in the Criminal Justice Service, EU Criminal Justice Programme, Project JLS/2008/JPEN/037, 2008-11 and JUST/2010/JPEN/AG/1558, 2011-13; AVIDICUS 3, Criminal Justice 2013 Action Grant, 2013–2015).
5. *DIRECTIVE 2010/64/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 20 October 2010 on the right to interpretation and translation in criminal proceedings*. http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:280:0001:0007:en:PDF (accessed 21 August 2014).
6. *DIRECTIVE ON THE APPLICATION OF PATIENTS' RIGHTS IN CROSS-BORDER HEALTHCARE* (2011/24/EU) http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:088:0045:0065:EN:PDF (accessed 24 February 2015).
7. Professor Steve Fuller holds the Auguste Comte Chair in Social Epistemology in the Department of Sociology, University of Warwick, UK.
8. 'in specialised translation, invisibility is the norm' (*my translation*).

9. Bush, Peter. 2006. 'The Writer of Translations'. In: Susan Bassnett & Peter Bush (eds) *The Translator as Writer*. London: Continuum, pp. 23–32.
10. One company website, Kwintessential, claims, for instance, (http://www.kwintessential.co.uk/translation/articles/expansion-retraction.html, accessed 21 May 2014) that 'average, well-written German technical, legal or scholarly text translated into English expands 20%. Parts lists or Material Safety Data Sheets can expand as much as 40%, while the average educational transcript expands only [*sic*] 30%'.
11. The terms 'persuasive' and 'operative' are often used interchangeably in discussions of textual functions. 'Operative' is perhaps the more neutral term, encompassing more convincingly the breadth of genres from instructions for use through legal contracts to advertisements than 'persuasive', a term which is better suited to the latter genre.
12. I am grateful to Khurshid Ahmad, Professor of Computing Science at Trinity College Dublin, for a helpful discussion on Bohr's ideas and for the following reference: Aaserud, Finn. 1990. *Redirecting Science: Niels Bohr, Philanthropy and the rise of Nuclear Physics*. Cambridge: Cambridge University Press (an edited collection of Bohr's 1913 trilogy of papers 'On the Constitution of Atoms and Molecules' in *Philosophical Magazine* Vol. 26, July, September, November). See also Ahmad & Jensen (1998).
13. Scarpa reports on such views in a discussion of cultural aspects of translation: '…dans certains domaines, les membres de cultures différentes tendent à conceptualiser et à dénommer les objets, les faits et les événements de la même façon' ('in certain domains, objects, actions and events tend to be characterised in the same way in different cultures'); consequently, the numerous aspects of the practice of specialised translation exhibit 'un caractère universel' ('a universal character') (2010:112–13) (*my translations*). It is not clear which domains are included here, but science is often assumed to be culturally neutral. This assumption is now being questioned, as we have seen.
14. The journal also includes interviews ('Feature') with practitioners and theorists, as well as a section for shorter pieces entitled 'Translator's Corner' and a section for reviews. The present survey only includes contributions which are included in the main section, 'Articles'.
15. Personal communication from Dr Lucile Desblache, then at London Metropolitan University and, since 2005, Reader in Translation and Comparative Literature and Director of the Centre for Research in Translation and Transcultural Studies at the University of Roehampton. She is also General Editor of *JoSTrans* and Chair of the Editorial Board.
16. http://www.no-mans-land.org/links_translation_magazines.htm#1 (accessed 31 October 2014).
17. 'Leading' is defined here as classified according to the rather controversial 2011 European Reference Index for the Humanities (ERIH) listing as 'INT1'. The classification system has recently been abandoned in favour of a flat listing including also social sciences – ERIH PLUS – under the auspices of the Norwegian Social Science Data Services (NSD) (http://erihplus.nsd.no/).

18. Articles (N=77, *not* including Book Reviews) were reviewed from: *The Translator,* volumes 10/1, 10/2, 15/1, 15/2 and 20/1 (n=36); and *Target*, volumes 16/1, 16/2, 21/1, 21/2, 26/1, 26/2, 26/3 (n=41).
19. For purposes of counting here, the articles which include both literary and specialised material are included making 22 + 3 = 25 in total.
20. I am grateful to Dr Jorge Díaz-Cintas, Director of Centre for Translation Studies (CenTraS) at University College London, for his confirmation of this rather surprising situation.
21. The parenthetic 'fiction' suggests a certain distance from the literary aspect of the topic, but a number of articles on literary translation appear quite independently of this issue, ranging from children's literature and video games to the translation of Chinese poetry in a Relevance framework.

2 Specialised Translation: An Orientation

1. 'Technical Translation and Related Disciplines', First Tsinghua-Lingnan Symposium on Translation Studies, 14–15 June 2002, Tsinghua University, Beijing. See also Kingscott 2002.
2. The growth of the Translation Studies subject field (or 'interdiscipline') even since 2004 is indicated in a recent Call for Papers (November 2013) in which it is estimated that there are currently over 150 Translation Studies-related journals in circulation and over 50,000 publications, 80 per cent of which have appeared in the last 20 years. The initiators of the CfP (for a Special Issue of *Perspectives: Studies in Translatology* on *Bibliometric and Bibliographical Research in Translation Studies*) ruefully add, however, that: 'Paradoxically, Translation Studies journals and books and doctoral theses are mostly invisible in the international academy and assessment framework' (Javier Franco [Aixelá], Pilar Orero and Sara Rovira-Esteva).
3. For example, the Vienna-based International Network for Terminology (TermNet) is offering two online training modules as part of the new ECQA (European Certification and Qualification Association) certificate in terminology management. And the German *Rat für Deutschsprachige Terminologie* (*RaDT*) has recently produced a guide to terminology management for domain experts in German, as well as in English translation.
4. Earlier versions of this argument can be found in the literature: see, for instance, Jumpelt (1961: 26, 28), who, in his early work on scientific and technical translation assumes that all such texts, which he classifies as 'pragmatic', after Casagrande, (1954), are informative, with the main focus on content (Casagrande, J.B. 1954. 'The ends of translation', *IJAL*, Vol.XX/4: 335–40). Elsewhere in her monograph on *Scientific and Technical Translation*, Pinchuk (1977: 11) also advocates 'an information-oriented approach to translation', whilst at the same time acknowledging that some 'service' (that is, LSP) texts are persuasive (1977: 18).

5. Byrne cites the examples of 'Big Bang' and 'Greenhouse Effect' from Locke 1992 (Locke, David 1992. *Science as Writing*. New Haven, USA/ London, England: Yale University Press).
6. Other categories include translation pedagogy (13.9 per cent), interpreting (7.6 per cent), machine translation (7 per cent), audiovisual translation (4.3 per cent) and Bible translation (4 per cent). It is not clear what makes up the remaining 30 per cent or so of the 10,450 items under consideration for this period (1991–2000). The data are sourced from BITRA (Bibliography of Interpreting and Translation), a free online bibliography hosted by the Department of Translation and Interpreting, University of Alicante, Spain. https://aplicacionesua.cpd.ua.es/tra_int/usu/buscar.asp?idioma=en (accessed 16 April 2014).
7. References to more Romance sources, particularly in French and Italian, can be found in Scarpa 2010.
8. The Series has since then been transferred to Frank & Timme.
9. Originally published in Italian in 2000 as *La traduzione specializzata,* the 2010 publication is a French translation and adaptation by Marco A. Fiola of the 2008 second edition of the original Italian *La traduzione specializzata. Un approccio didattico professionale*.
10. Also known as 'Language for Specific Purposes', particularly in the Anglo-Saxon world, reflecting a didactic focus consistent with the widespread use of English as the *lingua franca* of scholarly communication.
11. http://www.iti.org.uk/find-a-translator-interpreter (accessed 29 April 2014). It is worth noting that classifications by subject field vary considerably and are often *ad hoc*.
12. Some scholars have suggested that for the physical sciences, subject knowledge trumps linguistic knowledge (Finch 1969: ix, 1–2). It is worth noting here, however, that Finch was writing for trained scientists who might want to undertake technical translation as 'amateurs'. More moderately, Pinchuk (1977: 253) judges 'a university degree in a science subject or in engineering' to be 'a great asset'.
13. The full title is: *BDÜ Weiterbildungs- und Fachverlagsgesellschaft mbH* (see http://www.bdue.de/ (accessed 20 February 2014)).
14. Wolfram Baur, BDÜ, Germany: Contribution to Panel discussion, 7th European Masters in Translation conference, 'Rethinking Lifelong Translator Training', Brussels, 13 September 2013.
15. I am grateful to Dr Marcel Thelen of the International Business and Communication research centre at Zuyd University of Applied Sciences for his guidance here.
16. Without wishing to engage in the extensive debate about the scope of 'culture', it is worth mentioning here that some translation scholars have been brave enough to tackle the question. For Pinchuk, for instance, it embraces ecology, social relations, technology, beliefs and values, language, and art (1977: 155–6). For Newmark, it is 'the way of life and its manifestations that are peculiar to a community that uses a particular language as its means of expression' and consists of: ecology, material

culture (artefacts), social culture – work and leisure, organisations/customs/activities/procedures/concepts, gestures, and habits (1988: 94–103). See also Stolze (1999: 202–3) on LSP and culture.

17. An extreme example of this can be found in Buxton & Jackson's 1960 publication *Translation from Russian for Scientists*. The authors aim to provide a lexical and grammatical basis for scientists wishing to translate from the Russian through a lengthy exposition of the language system, followed by sentences and then texts (with some largely grammatical annotations) for translation.
18. An interesting recent development is signalled by a planned Special Issue of the *International Journal of Literary Linguistics* (2015), which will 'offer state-of-the-art contributions on current *linguistic* research on literary translation' (Call for Papers, *emphasis added*). The guest editors are: Leena Kolehmainen (Joensuu), Esa Penttilä (Joensuu) and Piet Van Poucke (Ghent).
19. Writing much later in 2014 on the contribution to Translation Studies of linguists such as Mona Baker, Basil Hatim, Ian Mason and Mary Snell-Hornby, Bassnett acknowledges that 'linguistics itself has undergone its own version of a cultural turn' (2014: 28).
20. See footnote 4 above for the full reference for Casagrande 1954.
21. Although IATE (http://iate.europa.eu) gives 'pin' here (accessed 27 October 2014).
22. Hall, Edward T. 1990/1959. *The Silent Language*. New York: Doubleday. See Katan (2004: 42–8) for an accessible summary.
23. Scarpa further notes a 'very' close link between terminology and translation through their connection with the transfer of specialist knowledge or the marketing of products (2010: 59).
24. Bowker & Pearson (2002: 26–7) mention LSP-specific collocational patterns and syntactic preferences as well as genre-specific macrostructures (which they call 'stylistic features') to demonstrate that 'LSP is not simply LGP [Language for General Purposes] with a few terms thrown in'.
25. See Scarpa (2010: 14–7), for instance, for one possible characterisation based on a three-level model of text 'macrotypes' which are: highly restricted, moderately restricted, or relatively unrestricted (*très contraignant, moyennement contraignant, peu contraignant*), where the various gradations relate to the degree of restriction the author imposes on the reader's interpretation of the text. Hence, to paraphrase Scarpa, regulatory texts such as laws aim to allow a minimum of interpretation, whereas literary texts allow many interpretations in accordance with their expressive function. The three macrotypes cited by Scarpa are attributed to Sabatini, F. 1999. '"Rigidità-esplicitezza" vs "elasticità-implicitezza": possibili parametric massimi per una tipologia dei testi'. In: G. Skytte & F. Sabatini (eds) *Linguistica testuale comparativa*. Copenhagen: Museum Tusculanum Press, pp. 141–72.
26. The terms 'text type' and 'genre' are often used interchangeably in English. This is not the case in the current volume as a useful distinction can be made between the two in accordance with the German *Texttyp*,

which is a functional classification, and *Textsorte*, relating to conventionalised forms (see Göpferich 1998a for a summary). Definitions of 'genre', as understood here, can be found in Bhatia (1993: 13): 'a recognizable communicative event characterized by a set of communicative purpose(s) and mutually understood by the members of the professional or academic community in which it regularly occurs. Most often it is highly structured and conventionalized with constraints on allowable contributions in terms of their intent, positioning and functional value', and in Bex (1996: 137): 'A genre […] is best seen as an aggregation of communicative events that fulfil a common social function'. Although the conventionalisation of textual features is important in genre identification and production, particularly in the fast-moving globalised world of today, genres are not typologically static: existing genres evolve and new genres emerge (see Garzone, Catenaccio & Degano 2012).

27. See http://hmctsformfinder.justice.gov.uk/courtfinder/forms/pa02-eng.pdf (accessed 1 August 2014).
28. Markel identifies the possibility of variations in organisation in different cultures and advises technical writers to 'take steps to ensure that your message is not obscured by an organizational pattern that is unfamiliar to your readers' (2004: 161).
29. Popular ideas about meaning tend to reduce what is a complex task of constructing meaning in communicative situations to a rather ossified dictionary-derived view of lexical meaning. An incident in the Australian parliament (October 2012) illustrates the point well. The then Prime Minister, Julia Gillard, responded to a motion from the leader of the opposition, Tony Abbott, accusing the male Speaker of sending sexist text messages and seeking his resignation, by robustly accusing Abbott himself of 'misogyny'. Gillard was then accused by her critics of misusing the word to mean *entrenched prejudice against women* when the dictionary definition indicated the much stronger *pathological hatred of women*. However, Gillard was vindicated when the editor of the authoritative Macquarie dictionary promptly announced that their definition was out of date and that it would be updated to reflect current usage.
30. My translation of extracts from the original German. 'In der Gemeinsprache gilt als "Norm" nur der tatsächliche Sprachgebrauch. […] In der Terminologie dagegen, mit ihrer ungeheuren Fruchtbarkeit an Begriffen und Benennungen, führt die freie Sprachentwicklung zu *einem untragbaren Durcheinander*' (Wüster 1974:68, *emphasis added*).
31. The General Theory of Terminology or GTT.
32. Wüster's work also deals with language planning, but in a different theoretical framework from the more linguistically-oriented 'Socioterminology'; he regarded the standardisation of terms as the only relevant aspect of language planning in technical domains (Wüster 2001/1955: 261).
33. See, for instance, Chapters 8 and 9 of Bowker & Pearson (2002) for a basic introduction.
34. See also Antia, Mahamadou & Tamdjo (2007) mentioned earlier in this chapter.

3 Borders and Borderlands

1. Two anecdotes are indicative. The first concerns Prof. Dr Wolfram Wilss, who was appointed to Saarbrücken University in Germany in the mid-1960s: he once claimed (personal communication) that when he first started to write about translation, he made a conscious decision to exploit the heavy style of German academic writing in order to demonstrate to sceptical colleagues the scientific (*wissenschaftlich*) value of this new academic subject. The second concerns an insider report from a UK Russell Group university languages department that a proposed Master's degree in translation was something that should be left to less prestigious universities.
2. *Journal of Borderlands Studies*, Volume 1, 1986. Available at http://www.tandfonline.com/loi/rjbs20#.UwOrH84QP9o (accessed 18 February 2014).
3. This view is articulated in a Call for Papers (January 2014) for a planned edited volume on 'Reflexive Translation Studies' (Şebnem Bahadir and Dilek Dizdar).
4. Delabastita, Dirk 2003. 'Translation Studies for the 21st century: Trends and perspectives', *Génesis*, 3: 7–24.
5. In their seminal 1990 publication on the 'cultural turn', Lefevere & Bassnett mention at least five conceptualisations of the translation phenomenon, all illustrated in relation to literary translation: 'transformation' (1990: 6), 'manipulation' (ibid.), 'mimicry of the dominant discourse' (ibid.), 'rewriting' (1990: 9) and 'cultural appropriation' (1990: 11).
6. Westman, R.S. 1980. 'The astronomer's role in the sixteenth century: A preliminary study', *History of Science*, 18: 105–47.
7. Trivedi, Harish 2007. 'Translating culture vs. cultural translation'. In: Paul St. Pierre & Prafulla C. Kar (eds) *In Translation – Reflections, Refractions, Transformations*. Amsterdam & Philadelpha: John Benjamins, pp. 277–87.
8. This is 'based on the sociological, cultural and sociolinguistic characteristics of a linguistic community, aiming at the study and the development of its technolects in accordance with those characteristics' (Section 3 Terms and Definitions, PD [Published Document] ISO/TR 22134: 2007, *Practical guidelines for socioterminology*). As the ISO Technical Report points out, a standardising approach to terminology work is not appropriate where local practice in different socio-professional groups varies. A more descriptive approach is needed. But rather than being an alternative to prescriptive terminology work, the difference seems to be principled and fundamental. Socioterminology aimed to return to language usage, that is, the textual behaviour of terms including synonymy and polysemy as potentially functionally motivated phenomena, whereas the aim of a standardising approach is to eliminate variation. The origins of Socioterminology lie in the francophone world (for example, Gambier 1991; Gaudin 1993), especially francophone Canada, whereas the standardising approach is closely linked with German-speaking scholars. The early development of both strands could best be described as parallel rather than interactive.

9. See also Scarpa (2010: 60) for a brief discussion of the distinction between term and word.
10. Although there may be little understanding of the expert meaning, the form is still term-like.
11. See http://www.terminorgs.net/downloads/TerminOrgs_StarterGuide.pdf (accessed 29 April 2014).
12. Halliday relates his comments to 'scientific and technical discourse' in general, but a comparison with an expert-to-expert text on the same topic may reveal different patterns.
13. See also Nkwenti-Azeh (1994: 62) for further examples including the use of punctuation (stops and slashes), abbreviations and 'mixed combinations of the abbreviation and full-form words'.
14. In addressing the lexical needs of 'EST' (English for Science and Technology) students, Trimble (1985: 128–30) discusses what he calls (after Cowan) 'sub-technical vocabulary', by which he understands: 'those words that have one or more "general" English meanings and which in technical contexts take on extended meanings (technical, or specialized in some fashion)'. Examples cited include 'fast' in the domain of Medicine, as in 'arsenic-fast virus' ('fast' means here 'resistant to') and in the domain of Paint ('said of colours not affected by light, heat, damp'), and 'dog' (meaning: 'lathe carrier' in Machining; 'adjustable stop used in gears' in Mechanical Engineering; 'clutching attachment for withdrawing well-digging tools' in Petroleum Engineering). The cited examples all seem, however, to be straightforward terms, since the definition varies in each domain. Of more interest from a terminological (rather than pedagogical) perspective is Cowan's original definition of sub-technical vocabulary as 'context-independent words which occur with high frequency across disciplines' (see also Hoffmann 1985: 126–7 on *allgemeinwissenschaftlicher Wortschatz* which he places between general vocabulary and specialised vocabulary, characterised by lexical units which occur in several disciplines). Possible candidates might be items such as 'effect', 'performance', 'system' which tend to participate in compounds across many domains. The terminographical issue is whether to include them as separate entries in a domain-specific terminology collection: since they are semantically relatively weak as single words, it makes more sense only to include them as parts of semantically more specific compounds.
15. The shift from sentence to text as the relevant unit of translation also reflects the re-orientation of classroom exercises, as translation for professional rather than language-learning purposes established itself in university curricula across Europe.
16. 'a thematically and/or functionally oriented coherent and complex entity consisting of verbal and/or non-verbal signs' (*my translation*).
17. Problems do arise, however, in representing a *class* of objects, which is an abstraction from reality. For instance, there is no such type, generic elephant, in the real world, only African elephants and Indian elephants.

18. Halliday (1989: 61–75) describes a number of ways of calculating lexical density, which he defines as a ratio between lexical items ('content' words) and grammatical words ('function' words) or between lexical items and clauses. The proportion is higher in written than in spoken language, making the former more 'dense', the latter more 'sparse'. Halliday argues from the point of view of English that lexical meaning is carried largely in the nouns. His explanation rests on two factors: the capacity of the nominal group for modification and embedding, and the thematic structure of the clause which favours clause-initial position – often nominal rather than verbal – for the presentation of propositionally basic information. Whether the second argument could be extended to other languages with a grammatically more flexible word order than English would need to be empirically investigated.
19. Contrast this with Nord's (1991: 1) prescriptive view of translation-oriented text analysis as ensuring '*full* comprehension and *correct* interpretation of the [source] text' (*emphasis added*). While the view that specialised texts leave little room for interpretation is common but overstated, what is particularly surprising about Nord's statement is that she claims to be developing a model of *general* applicability (1991: 2).
20. I am grateful to David Bennett, professional freelance translator, for this information.
21. I am grateful to Sara Dicerto, PhD student, for the following reference sources: http://translation-blog.multilizer.com/top-reasons-for-translation-crowdsourcing/; http://www.nbcnews.com/id/24205912/ns/technology_and_science-internet/t/facebook-asks-users-translate-free/#.USyPE6Latic (accessed 16 August 2014).
22. An anecdote will illustrate how a functional view of 'text' can be applied. While teaching in a German university, I requested short-term leave to attend a conference abroad. Having made the appropriate arrangements, I duly went to my conference. Several weeks later, a reply dated *after* the end of the conference arrived from the University's central administration refusing me permission to be absent. The function of the rejection letter was therefore unclear. Was it a text at all even though it fulfilled all lexical, grammatical and genre conventions? Even my best co-operative self could not decide what the text was *for*.
23. 'Sequential' because the source text is processed at the same time or earlier than the target text; 'imitative' to distinguish translating from, for instance, editing or other essentially target-oriented activities; and 'quoting' (the most complex criterion), understood as the possibility arising in part from the 'structural universals of human language' of using 'lexico-syntactic devices for demonstrating, or dramatically representing, the discourse of others' (Mossop 1998: 247).
24. See Jumpelt (1961: 27) for an early notion of functionalism in translation: 'Die Űberstezung läßt sich nicht in "Regeln" verfassen, wohl aber in Gesetzmäßigkeiten. Diese variieren auf Grund dreier Faktoren (Leser, Zwecksbestimmung, Textart).' ('The nature of translation cannot be captured in terms of "rules", but rather in terms of regularities. These

vary according to three factors (readers, stated purpose, and genre)' (*my translation*).
25. Merino reports on the changes in the English and Spanish titles (2003: 109).
26. Koller (1992: 272–91, 297–300) provides a detailed account of differences between the translation of what he calls *Fiktivtexte* and *Sachtexte*.

4 Terminology and Specialised Translation: A Historical Perspective

1. Malmkjær (2007) also argues that literary texts contain 'specialised terminology' but her argument is slightly different from the one put here. On the basis of a literary case study (of a fairy story by the Danish author Hans Christian Andersen), she argues that Andersen uses selected adjectives in a way in which they '*function* […] as specialised terms' relating to the topic of the story (2007: 501, *emphasis added*). The contrast here is between Andersen's 'local' use on the one hand with what is normally thought of as LSP translation on the other hand where there is a degree of consensus about term-concept relations between different writers, including translators, within a particular subject area.
2. See, for instance, the novels by Stieg Larsson, Henning Mankell and Jo Nesbø, translated from the Swedish by Reg Keeland (pen-name of Steven T. Murray), Laurie Thompson and from the Norwegian by Don Bartlett.
3. Unfortunately, Gotti gives no examples.
4. The sources cited here are secondary. Within those sources, a certain circularity can be detected in that they often cite each other (as indeed I am doing here). However, references to many more specialised sources can be found in Kelly (1979), Rener (1989) and Vermeer (1992a, 1992b).
5. See also Dryden's admission: 'I am ready to acknowledge that I have transgressed the rules which I have given; and taken more liberty than a just translation will allow' (Dryden 1989/1680: 12).
6. Bassnett's example concerns Icelandic sagas: the translations were used in the 19th and early to mid-20th century to evoke the 'greatness of a pan-Teutonic past' before being recast in the context of Iceland's independence from Denmark in 1944 as great literature worthy of an independent nation.
7. Rener (1985: 9) insists on using the Latin terms in order to avoid imposing what he considers would be anachronistic interpretations on classical concepts.
8. Although synonyms could be introduced into a translation for rhetorical reasons, that is, to avoid boring the reader through repetition after a short interval (Rener 1989: 233–5).
9. Vermeer (1992a: 310) claims that culture- and language-specific understandings of the concept are not in evidence until the Renaissance.
10. Earlier versions of this standard are: ISO/R 704: 1968 *Naming Principles* and ISO 704: 1987 *Principles and Methods of Terminology*. Both have now

been withdrawn. ISO 704: 2009 is the current version with the amended title *Terminology work – Principles and Methods*.

11. Or multi-component terms, depending on the specific morphological patterns of the language in question.
12. One principle which is not explicitly covered is preference for the native language, which prioritises 'native-language expressions' over what are called 'direct loans' (ISO 704 2009[E]: 41). The latter principle does not explicitly acknowledge the difficulties associated with culturally specific items, although the transfer or transliteration of a so-called 'appellation' (such as the name of an institution) is permitted where no official translation is in use. A couplet, that is, the addition of an 'explanation or translation as an aid to comprehension' (ibid.) is then recommended.
13. Also reported in truncated form in Rogers (2006b).
14. Some examples included in this section are also cited in Rogers (2006b).
15. We should note, however, that terminologists are rarely concerned with circumlocutions as this method relates to textual use, which may be ephemeral, rather than codification for general re-use in future texts.
16. A brief anecdote is illustrative here. A Master's student once complained to me about the choice of source texts by his technical translation tutor. The basis of his complaint was that not all terms in the said texts could be found in the recommended dictionaries.
17. Chesterman's (2000) adopted concept of 'meme' is borrowed from Sociobiology and can be understood as a kind of 'cultural gene'; the concept attempts to capture the tendency of ideas and conventions to be passed from one culture to another across languages and time.
18. The chapter on 'Translators and the Writing of Dictionaries' was written by Henri van Hoof.
19. Vermeer (1992a: 50–1, citing other sources) reports that the cuneiform script could be read either as Akkadian or as Sumerian (the language of ritual), as, for instance, today's international traffic signs, since the Semitic Akkadians adopted the Sumerian script. Bellos (2012: 213) reports that the older culture of the conquered Sumerians was treated by the invading Akkadians (*circa* 2250 BCE) as an asset, and that Sumerian '[l]aws and legends, rules and chronicles, were translated from Sumerian into Akkadian, and knowledge of Sumerian became the mark of an educated man throughout the many centuries of Akkadian and Asyrian civilization' (2012: 213).
20. The dates reported for the publication of the 17 volumes in Felber (1984: 63) and Felber & Budin (1989: 140) are 1906–1939; Felber (1998) gives 1900–1932; Felber (1984: 18) reports the publication dates as 1906–1928.
21. The chapter 'Translators and the Dissemination of Knowledge' was written by Myriam Salama-Carr in collaboration with Ronald H. Bathgate, Jean Delisle, Clara Foz, Li Nanqiu, Shantha Ramakrishna and Lars Wollin.
22. For the Secretary of State, Canada, a 'glossary' is simply a bilingual word list. If definitions are included, it is a 'vocabulary'.

5 Terminology and Text: Closing the Gaps

1. 'Prior to the current century, practically the only way of creating new morphemes was to borrow them from other languages or language families' (*my translation*).
2. John Bullokar's *An English Expositor* (1616), which aimed to 'teach "the interpretation of the hardest words vsed in our Language"' (Gotti 2003: 176). A contemporary hard-words dictionary (Robert Cawdrey's *Table Alphabeticall* [1604]') was less neutral in its statement of aims, as reflected in its misogynistic sub-title: 'meant for "the benefit and helpe of Ladies, Gentlewomen, or any other unskilfull persons"' (Gotti 2003: 174).
3. Three familiar possibilities were also set out in an earlier German standard for naming concepts, DIN 2332 (*Benennen international übereinstimmender Begriffe*/'Naming of internationally equivalent concepts'): coinage, borrowing (direct and assimilated) and loan translation; paraphrase or circumlocution is not considered an option (but see ISO 704 2009[E]: 41, where this *is* an option). The 1985 edition changed the priority given to Latin or Greek as the basis for coining new terms – rather eurocentrically known as 'internationalisms' – citing a preference for the use of an already familiar term which can be adopted through affixation of some kind, even where the familiar term is a loan from English, for example, *Design* → *Designer* (reported in Arntz & Picht 1995: 185), presumably for reasons of clarity in preference to propriety. Only if this is not possible, and if a loan translation is inappropriate does the standard recommend that a new term be coined, and then preferably with neo-classical affixes, ensuring some formal similarity across languages. Hence, in practice, neologisms of different origin are the favoured solution: derivation → loan translation → coinage. (A new edition is now available as DIN 2330: 2013–07 *Begriffe und Benennungen – Allgemeine Grundsätze*. English title: 'Concepts and terms – General principles'.)
4. As also in earlier times: see Chapter 4 on the development of 17th century scientific English, as reported in Gotti (2003).
5. See also Newmark's (1988: 149–50) comments on the translation of neologisms in Section 4.
6. See Rogers (2006a) for a view on the difference between 'termbank' and 'termbase'.
7. This assumes that the termbank or termbase is not a knowledge base, which has structured links between its entries, for example, as classes and sub-classes of objects that reflect the ontology of the domain. This compares to the largely atomic nature of the data structure of a standard termbank/base in which each entry is sub-divided into largely independent fields, leaving any inferencing to the human user. Databases are good at encrypting knowledge, but a knowledge base can be used in conjunction with an inference engine to infer new facts from a combination of known data or facts. Knowledge-based systems use heuristics, rules of thumb, to make such inferences (Khurshid Ahmad, Trinity College Dublin, personal communication).

8. 'It's not a question of identifying and then filling "gaps" when translating, but rather of creating a text which is fit for purpose' (*my translation*).
9. Rener 1989: 99, 100, citing Quintilian: 'when I want at home' (*Rener's translation*).
10. See also Gotti 2003: 159–61.
11. See also Wüster 1985/1979: 35–6, where he introduces so-called *Gastwörter* as words which retain the inflections of the donor language.
12. I am indebted to Vassilis Korkas, former Senior Tutor in Translation, University of Surrey, for these examples and much background information in relation to translation and modern Greek.
13. I am grateful to Polymia Tsagouria, who very patiently tried to teach me some modern Greek, for her etymological research.
14. Mermin (1981) describes in lively terms the origin of his idea to use 'boojum' to designate the symmetrical pattern of a 'spherical drop' of He^3-A (a helium isotope) against metaphorical competition from 'flower', 'bouquet' and 'fountain', all of which were, through their evocation of shape, better motivated than the nonsense word. For Mermin, the connection with 'boojum' (another name for the Snark) was a personal association of Mermin's, namely, that the symmetrical pattern in the spherical drop 'softly and suddenly vanished away', as did the Snark (my thanks to Khurshid Ahmad for his explanation of He^3-A).
15. As reported by journalist Steven Poole in: 'Lexicography: Just how new is a new word after all?', *The Guardian G2*, 21 May 2014. Another press report even lays claim to the inevitably ephemeral 'elfie' – a selfie accidentally taken by an elephant on a lost mobile phone in a safari park (*Daily Mail*, 29 May 2014). These examples illustrate the humorous inventiveness as well as the ebb and flow of new words in general language. As Newmark says: they 'may stay, may vanish' (1988: 148).
16. I am grateful to Dr José Manuel Ureña Gómez-Moreno of the University of Castile-La Mancha for his permission to use these examples (personal communication).
17. Empirical work is needed here to explore preferred methods of term formation, which may differ not only according to the circumstances of formation but also according to subject field and language pair (for secondary term formation).
18. 'Calque' is sometimes used more broadly to cover all types of source-language influence, not just the part-for-part matching of loan translation, but also including the extension of target-language word meanings (*Lehnbedeutung*), new creations based loosely on a source-language word (*Lehnschöpfung*), and a loose type of loan translation or loan formation (*Lehnübertragung*) (Bußmann 1990: 215, 444; Bussmann 1996: 61).
19. Rener (1989) transliterates his Greek examples.
20. A fuller account, in the context of attempts to rid Ukrainian terms of Russian influence post-1990, is given in Rogers 2004c.
21. I am grateful for these examples to Annika Harzhofer, at the time of this personal communication Translation Manager at Xerox, UK.

22. The on-line hacker Jargon File (on-line version of *The New Hacker's Dictionary*, Eric S. Raymond) http://www.outpost9.com/reference/jargon/jargon_toc.html (accessed 9 August 2014).
23. Reported in Rener 1989: 38 from: Le Boeuffle, A. 1987. *Astronomie, astrologie, lexique latin*. Paris: Picard, p. 19.
24. The distinction is sometimes made in the Terminology literature between neology in general and in special languages. The latter is then called 'neonomy', which Pecman attributes to the French Canadian terminology scholar, Guy Rondeau.
25. Halliday, M.A.K. 1998. 'Language and knowledge: The "unpacking of text"'. In: J.J. Webster (ed.) *The Language of Science*. London/New York: Continuum, pp. 24–48.
26. I am grateful to Els Diet, University of Surrey graduate (1990–1991), subsequently a translator with Trans-Manche Link during the latter stages of the tunnel construction, for this example.
27. The two competing terms provide a good example of a domain-specific ideological battle in which the widely used term 'poll tax' allusively evoked the 14th century Peasants' Revolt against *inter alia* a similar *per capita* tax; the official 'community charge' was an attempt by the Conservative government of the time to appeal to a communitarian spirit of fairness based on the number of adults living in a property. The tax was eventually replaced in the next Conservative government by a modified property-based tax, more neutrally called 'Council Tax'. A more recent UK example is that of the so-called 'bedroom tax', a term used by those who are critical of the government's decision to remove a 'subsidy' paid to social housing tenants if they are deemed to need fewer bedrooms than their accommodation affords. The official phrase is the rather wordy 'removal of the spare room subsidy'. The fact that the subsidy is calculated in terms of bedrooms is, of course, also a UK culturally specific feature.
28. I am again grateful to my colleague Vassilis Korkas for the Florou reference and for this observation, based on many years' experience of scientific-technical translation and translation teaching from English to Greek.

6 Concluding Remarks

1. See, for instance, news items such as: Mark Easton on 'Cost in translation' available at http://news.bbc.co.uk/1/hi/uk/6172805.stm (accessed 14 August 2014) and 'Translation costing public £100m' available at http://news.bbc.co.uk/1/hi/uk/6174303.stm (accessed 14 August 2014). Items such as these continue to appear in the UK media.

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