Practical 11 Tutor notes

11.1 Scientific and technological translation

Most students will be wary of this assignment, because of their ignorance of the field. But if they prepare it properly, translating it as best they can and noting points which require specialist advice, they will find the class reassuring: they will realize that after some induction into technical translation it is not so frightening and difficult a subject area as they might imagine. If an expert in tunnelling, or at least in some form of civil engineering, can be brought in for the class, so much the better, but that is not essential – the TT given below clears up any obscurities of syntax and vocabulary not covered in the contextual information or in the body of Chapter 11. Apart from specialist vocabulary, two more general stylistic points are worth a mention. (1) As typically happens in German–English translation, the subject of 'erfolgt' (l. 1) is verbalized ('Die Herstellung der Abdichtung [. . .] erfolgt' becomes 'The sealing [. . .] will be formed'). (2) Since this *Baubeschreibung* is clearly intended as a *description of the works*, full finite verbs are used in the TL ('will be formed' etc.); where the same type of material is used to give instructions to contractors, the style tends to be clipped, using 'to be' without the finite verb ('the sealing to be formed in segments'. 'site traffic to be rerouted', etc.).

11.2 Scientific and technological translation

Similar observations regarding wariness and reassurance apply to this assignment as to 11.1. It is best done at home, if possible in groups. It will certainly take more time than would be possible in class. As regards genre, the text is from the field of control engineering, a subset of electronic engineering. Careful use of a good general dictionary will yield many of the terms required, as will Google searches, but consultation with an expert is still recommended. A very useful specialist dictionary is the Siemens *Fachwörterbuch Energie- und Automatisierungstechnik*.

Technical terms aside, the text is a good example of the need for vigilance as regards logic, grammar and accuracy of spelling. In line 12, any translator might hesitate as to whether the hyphen in 'Geschwindigkeits- oder Lageführungsgrößen' marks omission of '-größen' or of '-führungsgrößen'. In fact, it is the latter, as the context suggests: 'Geschwindigkeit' and 'Lage' are the things being controlled, so the calculated values are 'Geschwindigkeitsführungsgrößen' and 'Lageführungsgrößen'. The clearest translation would therefore be 'reference variables for speed and position'. However, if

the translator were not certain whether '-führungs' belongs in both words, the answer to the dilemma would be the one chosen in the published TT – an engineer reading the text would assume the correct option anyway. In line 14, 'der Führungsgröße' is a potential double problem. (1) Is it a dative (from 'anzupassen') or a genitive following 'Zeit'? If students have followed the logic of the text, they will see that it is the latter. (2) Similarly, following the logic closely should make it clear that this word is a misprint for plural 'Führungsgrößen'. It should be stressed to students that misprints are no less common in technical than in non-technical texts, but are of course potentially more serious.

In discussing the published TT, a number of points might usefully arise. (1) 'Drehzahlregelung' is rendered as 'speed control'; all motors rotate, and motor speed is the speed at which the motor turns – an example of where a standard TL technical term leaves implicit something that is explicit in the standard SL technical term (cf. p. 136 of the coursebook). (2) The last sentence of TT paragraph 1 is not clear; a closer translation would be 'The motor used for this can be a brush or brushless DC motor of up to about 400 W.' This is also another example of where TL and SL conventions are slightly different: some electric motors have carbon brushes as commutators, but others are 'brushless', having electronic commutators which permit higher speeds. So while it is clear to speak of an 'electronic DC motor', it is more idiomatic in this genre to say 'brushless DC motor'. (3) In line 6, 'times for' is preferable to 'times of'. (4) The TT ignores 'u.a.' (ST l. 10); the simplest way of rendering this is to insert 'and other' before 'parameters'. (5) Each 'Führungsgröße' ('reference variable') has its own time, but there are a number of reference variables; it is more idiomatic in English to put 'time' in the plural: 'the times of the reference variables'. This last example is a reminder that, unless there are genre-specific counter-indications, even technological TTs gain from being written in ordinary idiomatic English. For two other possible examples of this, consider 'carry out' *vs* 'perform' (TT l. 2); and 'following reception' *vs* 'once it has received' (TT l. 3) (but note the high incidence of nominalization in many technological genres, in both languages).

11.3 Scientific and technological translation

As a piece of journalism, this is a much more accessible text than the previous two, while still requiring precision in terminology. The technical terms can be found in standard dictionaries, so the assignment can easily be done in class, preferably in group work. As with any ST, as much attention needs to be given to genre and style as to message content.

PRACTICAL 11.1 CLASS HANDOUT

'TUNNELAUSKLEIDUNG' TT

Compare your TT with the following (unpublished) one produced by a specialist:

Tunnel lining

The sealing and inner lining will be formed in segments between the North Portal, Kehl, Flößgraben and South Portal breaking-out points. Work on constructing the inner arch of the second bore will commence immediately after each section is broken through. Once the second bore is concreted, site traffic will be rerouted and the first bore concreted.

By using 2 jumbos concreting should proceed at a rate of some 55 m per month so the inner lining of both bores in the Nordportal–Kehltal and Kehltal–Flößgraben sections can be concreted one after the other. In the Flößgraben–South Portal section the inner linings of both bores will be concreted simultaneously.

As concreting of the lining goes ahead the Kehltal cavern will be constructed, followed by the Flößgraben cavern with its associated air intake adits and structures plus the approximately 20 m high ventilation shaft, the Kehltal water tower and the service buildings at north and south portals including the portal structures.

PRACTICAL 11.2 CLASS HANDOUT

INLINE-SERVOVERSTÄRKER TT

Compare your TT with the published one:

In addition to handling the 'speed control' and 'torque control' functions, the Phoenix Contact IB IL EC AR 48/10A Inline servo amplifier can also carry out independent drive positioning, following reception of a position setpoint. This means that a brush or electronic DC motor operates as a motor up to approximately 400 W.

The drive run during positioning consists of the 'accelerate', 'run' and 'brake' segments. The times of the individual segments are calculated by the IB IL EC AR 48/10A from the homing path and from the acceleration ramp, speed and braking ramp parameters. These calculated values represent the speed and position reference variables. The internal speed and position controllers now have the task of adjusting the actual position using the time of the reference variables.

(Phoenix Contact 2004b)

PRACTICAL 11.3 CLASS HANDOUT

MALARIA TT AND COMMENTARY

(i)Strategic decisions

Unlike the STs in Practicals 11.1 and 11.2, this one is addressed to a non-professional readership interested enough in the subject to visit a quality newspaper's website and read the kind of article typically found on the 'Science' page. In genre, the piece is popularized science, respecting technical complexities but making them accessible to a general readership, partly through omitting certain details and partly through the everyday analogies of Achilles' heel and the doorkey.

The brief is to produce a TT for a similar readership, and thus in a similar genre, to the ST's. The three strategic priorities are therefore to respect technical precision and lucidity, but also to make sure that the popularizing analogies are clear and effective. In realizing this strategy, we shall if necessary supply details that the ST lacks.

(ii) TT

But[1] now a joint[2] Colombian–Swiss research team led by the immunologist Manuel E. Patorroyo claims[3] to have found a promising new lead.[4] The thinking behind the new vaccine started[5] from the observation that the malaria parasites have a kind of molecular Achilles' heel. In order to penetrate the red blood corpuscles in which they multiply, these single-cell organisms need a protein known as MSP-1, which they carry on their outer surface like a kind of doorkey.[6] This key[7] opens the corresponding 'lock' in the red corpuscle membrane, allowing the parasite to enter.

The researchers succeeded in modelling[8] the MSP-1 protein molecule in the laboratory[9] and in modifying the so-called binding site – equivalent to the 'bit', or business end,[10] of the all-important 'key' – in such a way as to create a ring-shaped peptide. A cyclical molecule of this type has a particular structural shape, and[11] is only very slowly digested by the enzymes which break down proteins. Both these features hold out distinct promise for the efficacy of a future vaccine.[12] Experiments on animals confirmed that the artificial three-dimensional peptide does indeed generate a high concentration of antibodies which attach themselves to the MSP-1 molecules and thus render the 'doorkey' ineffective. Whether this line of research will lead eventually to the development of a vaccine remains to be seen.

(iii) Decisions of detail

1 'But' is needed to supply the contrast with the previous paragraph which is conveyed in the ST through the adversative 'Jetzt' following a narrative of failure.
2 To comply with conventional idiom, and for immediate clarity, 'joint' is added.
3 ST 'will' has to be translated with a particularization, either 'claims' or 'is claiming'; however, in the light of the virtually indiscriminate actual usage within journalism (both general and popular-scientific), it cannot be argued that the traditional distinctions between simple and continuous verb form (as e.g. in comparison of 'he swims well' with 'he is swimming well') hold in this instance with any force.
4 Virtually a communicative translation: 'vielversprechend' is no more enthusiastic than 'promising', and 'promising new lead' is an established TL expression in such contexts. For 'Ansatz', as used here, 'lead' is perhaps a less conventional translation than 'approach'; it is preferred – marginally – because it has in context the same literal meaning of a line pointing forward, but unlike 'approach' has connotations conveying a note of mild excitement suitable for a journalistic text.
5 The ST formulation is impersonal, and this can be imitated in the TT. But it is also elliptical, and in the interests of lucidity we fill the logical gap (which does not need to be imitated) by supplying 'The thinking'. 'Ausgangspunkt' is consequently translated with a verb.
6 SL 'Schlüssel' and TL 'key' have a broadly similar range of meanings in both the physical and the figurative senses of the term. However, in the present context it seems best to fill out the TT expression with a collocation that makes the simile more explicit while also giving it greater phonic impact. Our TT inserts 'a kind of' and specifies '*door*key'; either of these steps alone would slightly but distinctly improve TT readability, relative to the bald formulation 'like a key'.
7 ST 'Dieser' unambiguously refers to 'Schlüssel', but English 'This' could refer to the whole preceding clause; adding 'key' eliminates all possible ambiguity, though the sense would probably be clear even without it. A rather more likely 'Flüchtigkeitsfehler' here would be the stock rendering of pronoun 'dieser' as 'the latter'. More at home in a narrative of human events than in scientific discourse (popular or not), 'the latter' would strike readers here as a stylistic oddity.
8 The writer's 'nach[zu]bauen' probably means that a molecule closely resembling the one under study was created in reality. But on such evidence as is available it cannot be excluded that the writer is referring to computer modelling.
9 'Reagenzglas' is a regular SL metonym for 'laboratory' (cf. English 'test-tube baby'); a literal translation here would be comic.
10 Cf. note 6. The only terms available for ST 'Bart' are 'bit' or 'web'. The use of a rare and specialized sense of either of these common and very versatile words cries out for a supporting gloss so that comprehension is speeded up. The addition of 'or business end' provides the needed clarification in clear and reasonably compact form.
11 The 'und' probably denotes a causal relationship: i.e. the shape is the reason, or a reason, for the slowness of digestion. As the TT 'and' is unproblematic – leaving the cause-and-effect relationship open to inference as the ST does – the point might seem idle. It is raised here as a reminder of the advice in Chapter 11 that the technical translator needs in-depth subject knowledge (see especially pp. 134, 137).
12 In isolation, the ST gives a rather telescoped account of the science involved in

developing a vaccine, and here a point that is not self-evident is put very tersely. In the interests of ready understanding, our TT spells out that the vaccine still lies in the future.