It is generally assumed that dictionary compilers are intent on producing lexical aids of maximum usefulness to the consumer. Unfortunately, of course, there are various constraints militating against the purity of this aim. Wasteful duplication of energies and resources can result in the production of broadly similar competing products and what the consumer has to buy is not necessarily what he needs or even wants. Nevertheless, there is some truth in the assumption and therefore the question arises: how does the compiler know what the customer needs? The answer seems to be: by speculation. The compiler makes decisions based on a view of himself as user. This is rather like e.g. Princess Anne imagining what it is like to live on the dole: one grasps the broader outlines (does one not?), but inevitably falls short on the nitty-gritty.

It is, of course, no easy matter to discover how users use dictionaries. Certain insights are to be gained from studies of learners' errors, but error analysis is not, to my knowledge, concerned with the perhaps narrower, certainly here more germane, question of assessing the part the dictionary itself plays in error-formation.

Some interesting and useful information could well be gained from a systematic study of the researcher's own user-behaviour with a bilingual dictionary incorporating a language he was not very familiar with. Dictionary reviews, which at least to some extent are studies of user-behaviour, partly suffer, as sources of information for potential customers, from the fact that the reviewer is too familiar with the language involved. In any case, more convincing generalizations are clearly best made on the strength of larger as well as less well-versed subject samples.

It is, however, arguable that the larger the sample, the more misleading the information on user-behaviour can become. This is inherent in the fact that large samples can hardly be processed without resort to indirect observation in the form of questionnaires, and that the questions themselves encourage certain types of response, whether factual or not. Interesting, and necessary, studies involving this type of questionnaire have been conducted by Béjoint (1981) and Hartmann (1982), the former on monolingual English dictionary use by French students, the latter on bilingual English-German dictionary use by British learners. A juxtaposition of the answers to two similar questions from these surveys will serve to exemplify the problem:

Question 17: What kinds of words do you look up most often in the dictionary?
Students were given nine categories of words, and asked to put a mark against each category in one of the three columns (very) often - sometimes - (practically) never.
The results:
68% look for idioms very often
55% look for encyclopaedic words sometimes
53% look for culture-specific words sometimes
49% look for abbreviations sometimes
In contrast,
66% never look up common words
47% never look up structural words
45% never look up taboo words
38% never look up proper names

Antworten auf die Frage nach den am häufigsten nachgeschlagenen Worttypen verfeinern unseren Blick auf die Benutzungszwecke des zweisprachigen Wörterbuches. Welche Art von Wörtern werden von den meisten Benutzern gesucht? Es ergibt sich die folgende Gruppierung:

1. Grammatische Wörter (wie weil) 70.2%
2. Kulturbedingte Wörter (wie Knödel) 61.5%
3. Enzyklopädische Wörter (wie chemische Elemente) 54.0%
4. Geläufige Wörter (wie Bein) 50.3%
5. Slangwörter (wie doof) 46.6%
6. Unanständigige Wörter (wie Po) 24.2%
7. Andere 15.5%
8. Eigennamen 9.3%

Are subjects saying here what they do, or what they think they do, or what they think they ought to do, or indeed a mixture of all three? Do they all define the categories in the same way - and in the same way as the researcher? When all is said and done, do we not, on this basis, arrive at a consensus on how subjects are likely to behave when faced with a particular questionnaire, rather than authentic data on what they use the dictionary for? It brings to mind Vance Packard's (1957) tale of the toothpaste:

If you ask people why they brush their teeth, most of them will tell you that their main purpose in doing so is to get particles of food out of the crevices of their teeth and thus combat decay germs ... Advertising men ... however ... found that most people brushed their teeth once a day, and at the most pointless moment possible ... in the morning just before breakfast.

In my view, the implications of the above anecdote provide the only possible explanation for e.g. Grammatische Wörter coming top of the Hartmann (1982) survey list.

I conclude that, whatever the difficulties, the only reliable method of collecting data on dictionary user behaviour is by direct observation. Ideally, in other words, the researcher would actually watch users in action. But this, too, causes problems. Under such conditions it would probably be difficult for the subjects to behave normally as users. Also, it is unlikely that all the information the researcher needs would be retrievable via the visual medium. And finally, such an exercise is so time-consuming that the sample is likely to remain unrepresentatively small. The procedure outlined below attempts to makes the best of both worlds. I would welcome
suggestions for refining it. Subjects were given a printed statement introducing them to the task for which they had volunteered:

Dear guinea-pigs!

I am trying to find out what it is students (as foreign language learners) actually do when faced with the impossible task of producing a German translation of a 'difficult' English text, i.e. what, as it were, happens in the space between the source and the target language texts. Such information should be useful to both the teacher and the learner.

It is, of course, absolutely vital that your replies are honest!! What you yourself did matters only so far as it is indicative of what the majority did, so please approach this task as far as you can in a normal way.

It is equally vital that the data you provide in the columns below is complete. This may be a bit tedious and is clearly an abnormal way of going about things. Nevertheless, please try to be 100% conscientious - which does not mean you have to get it right!

The task is to translate the ringed section of the attached text in one hour. Please stop after exactly one hour, or, if you wish to continue, indicate clearly how far you got in the hour.

Please bring me the results of your labours personally as soon as you have finished, since there is another questionnaire to be filled in!

Very many thanks in advance - und viel Vergnügen!

The text for translation was part of an article entitled "Ladders - a case of get up and go" from the Business Section of the Sunday Times. The level of difficulty of a text to be translated into the foreign language is a controversial issue in language teaching, as indeed is the question as to whether foreign language learners should be required to translate into the foreign language at all. In some circles the use of bilingual dictionaries by language learners is often positively discouraged and where possible even forbidden. However, this is not an issue here. Given that bilingual dictionaries exist and are therefore obviously used, for both encoding and decoding, any attempt to gather reliable data on how they are used is justified solely by the success or otherwise of the undertaking. Within limits, the advantage of a difficult text is that it will provide an adequate amount of data within a manageably short space.

Until recently, Abru was understandably longer on design innovation than marketing clout. It licensed over its trend-setting three-in-one convertible ladder to Black & Decker in 1975. With a weight of advertising behind it sales promptly quadrupled from 300 to 1,200 and later hit a peak 2,000.

Now Abbey and Bruton are going nap on the Abru Convertible, which steps up to 4ft 9 in, extends to 8ft 6 in and weighs in at a mere 12 lb. It is claimed to be the first ladder "designed" by the public, which means that psychologist Alison Palmer conducted in-depth surveys to find out what people in Bristol and Watford actually wanted. And it will take a strain of 500 lb on the platform standing on wet lino, known to the trade as a "Bambi test" from its leg-sprawling effect on less self-confident steps.
The form below is the essential element in the operation, being the factor which most clearly distinguishes the investigation from a 'straightforward' analysis of written translations:

Name: ___________________________ Dictionary (title and edition):

<table>
<thead>
<tr>
<th>SEARCH ITEM</th>
<th>INFORMATION FOUND</th>
<th>None = (\square)</th>
<th>Useless = (\times)</th>
<th>Useful = (\checkmark+\text{headword})</th>
</tr>
</thead>
</table>

Please indicate below, as unambiguously as possible, exactly what it is you are looking for EVERY TIME you refer to the dictionary whether or not you eventually use the retrieved information in your translation. Not all search items need, of course, occur in the original text: anything you look up should be entered.

If you cannot find any reference to the item you are looking for, indicate this with an omission mark = none. If you do find a reference to the item but consider the information given useless for your purpose, indicate with a cross. If the information is useful, indicate with a tick. If you enter "useful" (= tick) please give the headword under which the useful information was found.

At the end of the hour, translations and forms were handed in and subjects answered on paper the following questions:

Did you read the section for translation first?
Did you read the whole text (during the hour)?
Did you read the whole text first?
Did you read the whole text at the end of the hour?
Did you read the whole text part-way through the hour?
How well do you think you coped:
  very well / fairly well / just about / very inadequately?
If you found the text difficult, say why.
Please make any detailed comments you wish on your own translation.
Do you think this survey will reveal anything useful?
If so, what?
Did you feel, while you were doing the exercise, that there was other potentially useful information that was not being elicited?
If so, could you specify?
Do you think the time constraint had any effect on your method of working?
If so, what would you have done differently otherwise?
Any other (serious) comments?

The data that is produced on the basis of a procedure such as that above is likely to be too heterogeneous if as many variables as possible are not eliminated in advance. In the initial study subjects were given free choice of dictionaries and other reference works. It is preferable, however, that at least each group of subjects use the same dictionary and nothing else. (If two groups of subjects were available it might, of course, be possible to assess the relative user-friendliness of two different dictionaries.)

Since one of the most interesting questions is how adequate/inadequate was the dictionary rather than the user, it would again be
helpful if the group were fairly homogeneous in terms of the level of attainment in the foreign language, e.g. if all subjects normally had roughly the same performance levels in translation into the foreign language. (Again, interesting data could be gained from comparing the user-behaviour of two separate homogeneous groups, e.g. a group with A-grade in German vs. a second group with C-grade.)

Also, the time set for the task should be the same for all subjects and roughly adequate for the majority, otherwise variations will arise from the degree of application, with subjects ranging from the can't-be-bothered/get-it-over-quick to the punctilious-in-the-extreme. One of the criteria for evaluating a dictionary must be speed of reference, which depends on (a) finding things, but also (b) finding them in a consistently logical, user-friendly place. An overzealous student can distort the rating by retrieving the apparently non-existent, given long enough to do so. For the text above, a time of two, rather than one, hour would have been appropriate.

There is neither time nor space in the context of this paper to present detailed findings. It might, however, be useful to make a few observations on user-behaviour that are of potential general relevance.

The majority of students do not (voluntarily) read the whole text through in advance of translating, but do so after they have begun to translate and begun to perceive difficulties with decoding.

A straight count of the number of search items per form suggests that more advanced students use the dictionary more often than less advanced, which is surprising, given that the need of the less advanced students to use the dictionary is greater. Perhaps less advanced students are less confident of retrieving the necessary information and thus more reluctant to try.

Almost all students use only the English-German section of the dictionary when translating into German. Even if they already know, e.g. the German for ladder, they may well look up the gender under ladder rather than under Leiter. More advanced students are slightly, but only slightly, more inclined to use the resources of the German-English section when translating into German.

Users of bilingual desk dictionaries do not appear to use the dictionary to look up commonly-occurring closed-set items such as prepositions, or open-class items which they may have met many times before. In the phrases conducted an in-depth survey and take a strain, the noun-entry is consulted first and the verb-entry not at all, or only when the noun-entry fails to assist. The compilers of the COLLINS GERMAN DICTIONARY are (justifiably) proud of their dictionary's coverage of what they call 'the central core' of the languages involved. Paradoxically, however, the more central the item, the less likely the user appears to be to look it up and, incidentally, the more space some of these items take up in the dictionary (cf. Paneth 1983 for a discussion on using 'central core' material from the dictionary in the classroom).

The tendency to translate word-for-word, come what may, is particularly pronounced amongst less advanced students but excessive amongst all groups. In the above text, design innovation invariably
appeared as noun-plus-noun in the German translation, and longer on was not infrequently rendered as länger an/mit, an idiom unattested in German. The tradition of viewing language as words in sequence rather than a system or systems of structures is a long one, which bilingual dictionaries (= Wörterbücher) with their one-word equivalents clearly reinforce. Dictionaries are not very good at conveying the realisation that an English noun, for example, need not and often does not have a German noun as its functional equivalent.

But even where a one-to-one mapping of word classes is acceptable, it is very difficult for the compiler to predict the necessity or otherwise of providing collocates for the learner working into the foreign language. On what grounds do the compilers of the COLLINS offer, under measure, Maßnahmen ergreifen, but not Maßnahmen treffen? The compiler's dilemma is, of course, an understandable one. He does not have enough data on either functional equivalence or probability of collocational occurrences currently available to him and relies there-fore on other dictionaries and his own experience of the languages involved, or rather what he can retrieve of it after a financially permissible period of reflection (cf. Hartmann 1983 for a proposal to use 'parallel texts' as data).

Nevertheless, quite considerable improvements have been made recently, as the following entries E₁, E₂ and E₃ from CASSELL'S GERMAN DICTIONARY (1978), LANGENSCHEIDT'S ENCYCLOPAEDIC DICTIONARY (1962) and the COLLINS DICTIONARY (1980) illustrate.

- **E₁:** license ['laɪsəns] 1. v.t. amtlich genehmigen or zulassen, bewilligen, konzessionieren (things); freigeben (a play); ermächtigen (a p.)

- **E₂:** li-ensure ['laɪsəns] I v/l 1. (j-m) eine behördliche Genehmigung erteilen. – 2. konzessionieren, amtlich genehmigen od. zulassen, (zum Gebrauch) freigeben. – 3. (Buch) zur Veröffentlichung od. (Theaterstück) zur Aufführung freigeben. – 4. (j-n) ermissigen. – 5. selten (j-m) erlauben, (j-m) gestatten. – II s Am. für licence l.

- **E₃:** license [laɪsəns] I n (US) see LicenZ. 2 vt eine Lizenz/Konzession vergeben an (+acc) a car must be ~d every year die Kfz-Steuer muß jedes Jahr bezahlt werden; to ~ a pub einer Gaststätte Schankkonzession or eine Schankkonzession erteilen; to be ~d to do sth die Genehmigung haben, etw zu tun; he is ~d to practise medicine er ist approbierter Arzt, er ist als Arzt zugelassen; we're not ~d for dancing wir haben keine Tanzgenehmigung; we are not ~d to sell alcohol wir haben keine Schankkonzession oder Konzession; secret agents are ~d to kill Geheimagenten dürfen Leute tötschießen.

However, even where compilers do indicate a clear awareness of the learner's need, consistency is lacking. In the following entry E₄ from COLLINS, the indications of general area of meaning (in brackets) are, of course, useful and a far cry from the days of the TEACH YOURSELF GERMAN DICTIONARY, which for e.g. plug gives der Pflock, der Stecker, and no more (cf. Hatherall 1982). But is it not arbitrary, in the case of the example below, to suggest functional equivalents (contexts) for insensitivity (b) and not for (a) and (c)?
E₄: insensitivity [in sens'tivitɪ] n (a) (emotional) Gefuhllosigkeit f (towards gegenüber).
(b) (unappreciativeness) Unempfänglichkeit f (towards). his ~ to the beauties of nature seine Unempfanglichkeit für die Schönheiten der Natur; his ~ towards the reasons behind the demands seine Verständnislösigkeit or sein Unverständnis für die Grunde, die hinter den Forderungen stehen.
(c) (physical) Unempfindlichkeit f.

For decoding there is a strong case for claiming that the most satisfactory bilingual dictionary is the one that contains the most entries (reliability is presupposed). For the translator into his native language, such a dictionary can also be an adequate tool for encoding, since enough information to generate a very wide range of e.g. collocational possibilities is retrievable from the user's own linguistic competence. On the other hand, if the user is working into the foreign language, the dictionary must either provide him with (almost) ready-made target language contexts or assist him to create appropriate contexts by analogy with the contexts given.

A final word on computers. From the learner's point of view computerization of unprecedented quantities of language data is a useful development, since it will give access to previously unobtainable information, e.g. typical collocates of a given verb, noun etc. within a given variety of text/language, thus providing comprehensive data to supply the learner's needs. Also, as Frank Knowles has pointed out, if the dictionary user is himself looking up data in a computer rather than in a book, his behaviour can be monitored with ease, at least in terms of what and when (how often). Wholly reliable information in these two areas should prove invaluable in also explaining how and why.

References

Paneth, E. (1983) "Using the dictionary" in *Treffpunkt* 15, 3: 3-7