WRITTEN INSTRUCTIONS IN JAPANESE AND ENGLISH: A COMPARATIVE ANALYSIS

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1. Introduction

In this paper, we present a study of some differences, linguistic and otherwise, that are found in a small corpus of written instructions for consumer products in British English and Japanese. The approach we adopt arises from the tradition of “contrastive rhetoric” that has been suggested for expository prose (cf. Kaplan 1966, 1976, 1977; Hinds 1983). We suggest that, if a useful “contrastive rhetoric” is to be pursued, not only linguistic resources, but the social and cultural context of text production and interpretation must be taken into account. In this way, we can not only describe, but explain, the linguistic choices made by text producers, and attempt to pinpoint areas of difficulty arising in translation and in language learning.

In our analysis, we have found not only micro-linguistic variation in terms of the resources that language users have at their disposal to express communicative intention, but important differences at higher levels of structure, including layout, document navigation, and the use of diagrams and pictures. Concentrating first on the cultural context against which instructions in the two languages are produced and read, we argue that the social relationships presupposed by the texts—between the ideal “instructor”, the manufacturer or producer, the user, and even the appliance itself—are managed quite differently in the two cultures. First, Japanese manufacturers feel a greater obligation to take care of the consumer than do their British counterparts, giving rise to differences both in linguistic content and in form. Second, instructions in Japanese do more interpersonal work in general, particularly in building a relationship between the product and the consumer (cf. Fairclough 1992)—a feature that is often realised graphically in terms of cartoons as well as in language describing particular scenarios in which the appliance might be used. Turning to the physical structure of the manuals, we argue that the Japanese manuals use graphical devices of almost every kind, from fonts and “framing” on the page to diagrams, both more frequently and more centrally than British ones. We comment in particular on expectations of how the page is to be navigated by the reader, how speech acts

1 The authors would like to thank the members of the Communication Seminar at the University of Stirling for their helpful comments on earlier versions of this paper. Any errors are, of course, our own.
of different kinds are delimited graphically from one another, and how diagrams are placed and labelled. We suggest in particular that cultural differences in the use of graphics mean that translation or customising of documents in different languages is not merely a textual matter, and that the realisation of semantic content must address the issue of "media allocation"—that is, whether a piece of information is to be realised as text, in graphics, or as a mixture of both. We then go on to examine the language used, looking in detail at choice of directive forms—utterances realising the intention that the user should perform a particular action. Here, we find that Japanese favours simple declarative statements and request forms for the realisation of directive intention, while in English various imperative forms take the place of request forms in popularity. In addition, choice of directive in Japanese is subject to variation in politeness forms throughout a single text, rather than fixed at the outset, depending on factors such as the perceived benefit to the hearer of performing the action and the textual positioning (e.g. whether as heading or as part of the main body of the text) of the directive. The study we present, while small in scale, gives rise to some useful insights into the nature of cultural, conventional, and linguistic differences between Japanese and English in this genre that will be of interest to translators, second-language educators, and those involved in computational approaches to document production.

1.1. The corpus

In order to describe the distinctions between Japanese and English in this genre, we need to be sure that the data that motivates our descriptions is not itself the result of a translation: however accomplished the translation, we cannot be sure that the translated text is free from the influence of structure and content that may be exerted by the source text. For this reason, following an approach adopted elsewhere (see, for example, Delin et al. 1994, 1996a) we examine Japanese-source and English-source instructions for similar consumer products. The means of production for instructions vary (some texts are written, for example, by production engineers, some by specialised teams of technical writers) and the texts vary in length, ranging from a single sheet to a substantial manual. This differentiation in length, even for similar products, is in itself of interest, and forms part of the cultural and conventional variation existing between instructions in the two languages.

While a wide range of texts is drawn upon for general comment, we concentrate on three sets of instructions from each language for close analysis. In Japanese, these are the instructions for a mini halogen torch (Osram brand), a steam garment cleaner (National brand), and a VCR (Mitsubishi brand); instructions for a Tokyo Rinsai Gas rice cooker are also studied in particular. For English, the instructions studied in detail are for a Uniross battery charger, an Electrolux cleaner, and a Mitsubishi VCR.
1.2. The approach

As existing research has shown (cf. Delin et al. (1994), Paris and Scott 1994, Gröte 1995), the genre of instructions is a particularly rich source of data for cross-linguistic comparisons due to certain deep commonalities between instructional texts that persist regardless of the language of presentation. To begin with, all instructions arise out of the basic understanding that the reader will perform certain actions in relation to a concrete product that exists outside the text, and that the text needs to convey, in varying degrees of detail, the nature of those actions and their sequence. We take the "basic" message of an instructional text, therefore, to be a set of facts and procedures that convey the necessary and sufficient information for the user to be able to perform various tasks with the product. The text should probably also communicate to the reader something of the rationale behind the action sequence: the task plan is usually clothed, then, in information and explanations to render the task plan convincing, memorable, and easy to understand (see in particular Paris and Scott (1994). Beyond these functions, however, instructional texts do not seem to diverge to any extent in terms of what their producers are attempting to do. Because of the frequency of the expression of a small number of communicative intentions in instructions, all instructional texts, regardless of what products they describe, are valuable sources for cross-linguistic comparison. We discuss in more detail the communicative intentions behind instructional texts in Section 4 below.

Our study begins with the general sociocultural background in Section 2: specifically, the cultural roles of instructions and consumer products in the UK and Japan that might give rise to different expectations in the two cultures about the structure and function of instructional texts. In Section 3, we go on to examine the issue of text on the page: layout, navigation, and the differing function and nature of diagrams and pictures between the two cultures. In Section 4, we focus on some linguistic issues, particularly the level of variation found between the occurrence of utterances conveying different kinds of communicative intention, the linguistic resources exploited in conveying those intentions, and the interesting variability in levels of politeness, both in Japanese and, more surprisingly, in English, that occur in various parts of instructional text. Finally, in Section 5, we discuss the implications of our findings, and suggest some avenues for further research.

2. Cultural issues in instruction production and interpretation

In considering the structure and function of instructional texts in these two very different cultures, it is useful to look first at the differing cultural assumptions surrounding consumer goods in the two language communities. These assumptions provide a context for understanding the role and requirements of the instructional document both for producer and for consumer.
The worldwide reputation of Japanese firms in electronic goods is well-known, and the domestic market has high expectations of both these and consumer goods in general. Japan has a vast and constantly changing range of consumer products: the Japanese consumer has come to expect a new group of products from the same company up to twice a year (Sakakibara 1994: 50), and some of these are only available to consumers in Japan, rather than for the wider market (Larke 1994: 39-40). The market for "basic" items (such as colour televisions, refrigerators, and washing machines) is now almost saturated, with such purchases occurring on average every seven and a half years. More rapidly-updated products, such as camcorders and word processors, are bought more frequently (ibid).

Various characteristics of society increase the pressure on consumption in Japan. Firstly, great social value is attached to having new or recent equipment, with the latest features. There is little or no second-hand market in consumer durables, since acquiring goods second-hand has been stigmatised in the Japan of the post-war booming economy. Secondly, living accommodation is generally small, which suits or perhaps fuels the current motivation in technology at least to pack more functionality into an ever smaller product, thereby fuelling customers' perceptions that new acquisitions are necessary. Finally, since in cities at least, land prices, place owning a home beyond the aspirations of most young people, the focus for acquisition is more firmly located on home contents, rather than on homes themselves.

Although new products are always becoming available, however, emerging new features do not appear to be as persuasive in the purchasing decision as other factors. After the bursting of the "bubble economy" of the late 1980s, consumers in the 1990s are not inclined to pay a premium for changes in product design that prove to be insignificant (Larke 1994: 140-1). The introduction of new features, and even the brand of the product, are not as significant in the purchasing decision, interestingly, as the store from which the product is bought. Larke (ibid: 45) suggests that this is at least as important as the brand of the product, and second only to price considerations. While some shops are linked to particular manufacturers, and therefore will determine the brand choice for all their customers, large electrical stores that may have eight or more floors of goods from different manufacturers dominate the market (ibid: 141). It seems therefore that brand will have an effect on choice only after the store has been selected.

Although they replace their consumer durables more frequently than their British counterparts, Japanese consumers still expect high quality goods and a correspondingly high level of service from manufacturers and shops. In fact, good service from both manufacturer and retailer is taken for granted. For example, when new purchases are delivered, consumers expect the shop to take away the old appliance either free or for a minimal charge (Sakakibara 1994: 51). Further, consumers can expect that the product will work, or that the
manufacturer will readily take responsibility if it does not. We will see in the comparison of content and language in the guarantee and servicing sections of consumer instructions that this responsibility is taken on more fully in Japan than in the UK, although the legal terms of the agreement between consumer and manufacturer may not differ to any great extent. In Japan, if there is a problem and the appliance has to be returned, this is seen as an imposition on the consumer: we will see this reflected in the high frequency of respect language in the instructions dealing with such situations. Examples of this are discussed in Section 4.

Some differences between Japanese and British English instructional texts arise from another facet of the social relationship between producer and consumer which differs between the two cultures. British instructions contain warnings and advice to the consumer to pre-empt a range of likely actions or situations that may endanger the consumer or the product. Japanese instructions take the responsibility to advise, warn, and pre-empt much further, however; this is revealed not only in the presence of a far greater number of warnings and points of advice, but also in the level of detail with which warnings are given. To a British reader, this approach might seem over-careful, or even invasive. However, to a Japanese reader, these are simply manifestations of "taking care"; Japanese notions of service and looking after someone involve anticipating the other's needs and meeting them before they are explicitly expressed. The instructions comply with these cultural norms, and warnings cover many more eventualities, however unlikely. In addition, warnings nearly always appear in a separate and distinct section in Japanese instructions. This is not always present in English, and the warnings are often different in nature, as we will discuss.

As Wright et al. (1982) have shown for British users, it is by no means always the case that instructions will be read right through from start to finish. Their study showed that there were many circumstances in which people would only read some, or even none, of an instruction booklet for a product. This is compatible with Wright's earlier (1980) suggestion that there are many situations in which the documentation is only consulted if there is a specific question or problem that the user wishes to answer. Although sets of instructions in both English and Japanese almost always carry an injunction to the user on the outside cover to read through the whole booklet before using the appliance, it seems that the booklets in Japanese that we have studied are far more frequently constructed in a manner that facilitates the quick look-up and reference uses that are more likely when the user becomes more adept with the product. As we will see in the next section, this difference has implications for the structure and layout of instructions in the two languages, since, in Japanese, distinctions between the functions of various stretches of text, and aids for navigation for quick look-up, are much more specialised than these devices in English.

As a final note, it is interesting to examine the general relationship that is constructed between the product, the producer, and the consumer, and how
this differs between the two cultures. As several researchers have pointed out (cf. Paris and Scott (1994), Murcia-Bielsa and Delin (1995)), one role of instructional documents is to “eulogise” the product. In British instructions, this eulogy is an optional element, and may appear either as a brief statement at the beginning of the instructions or dispersed in the text. The focus of such eulogy is often on the quality of the product, or on specific new features. In Japanese instructions, the positive evaluative comment is nearly always present, and most often merits a separate section in the document. Apart from its greater frequency, however, it is also different in emphasis: the focus is most often on the usefulness of the product for particular kinds of people with particular lifestyles. In this way, elements of the text and graphics do interpersonal work through what Fairclough (1992) has termed “building the relationship” between the consumer and the product. For example, Figures 1a and b show two comic strips, taken from four given in the Japanese Mitsubishi VCR manual, illustrating the specific merits of the VCR for two (stereo)typical consumers. The first is a busy businessman who likes to catch up with his viewing at the weekend; this VCR’s high-speed rewind (250 times normal speed) saves time and thereby prevents him getting irritated at having to wait. The second is a mother who is unsure about dealing with technology: the G-code pre-programming function makes it so easy that she wonders if she can pre-programme the next day’s dinner. Whatever we may think about the gender-role stereotypes involved, it is clear that a focus on the consumer–product relationship is a function of the manual, unlike its English counterparts. In addition, the interpersonal function of the Japanese text is heightened by the personification of the product itself. This is achieved through the use of cartoons, as we discuss further in section 3 below.
The father who watches videos intensively at the weekend—Fast forward and rewind at 250 times normal speed

'Five videos and half a bottle is my target at the weekend.'

But when he's finished watching, it takes a long time to rewind, and he gets drunk and bad-tempered.

But now there's high-speed rewind at 250 times normal speed!

'Now he doesn't need to get drunk and grumpy at the weekends any more'

Figure 1a: The benefits for father of owning a VCR (90% reduction)
The mother who’s no good with technology—
G-code pre-programming

‘Before, I used to get a headache just looking at the remote control.’
‘Oh dear...’

‘With G-code pre-programming, it’s easy!’

‘I’ll tell you about what I’ve pre-programmed on the VCR today.’

‘Wonder if I can pre-programme tomorrow’s dinner with a G-code...’

Figure 1b: The benefits for mother of owning a VCR (90% reduction)
3. Layout and graphical resources

The most obvious difference between the Japanese and English instructions is the fact that the English instructions are predominantly a linguistic product, while the balance of information-provision in Japanese is allocated more evenly between text and graphics. As Schodt (1983: 25) argues, the writing system itself may well predispose Japanese readers to more visual forms of communication; it is probably the most complex in the world, using a combination of three different scripts, two phonetic (hiragana and katakana syllabaries), and the other ideographic (kanji). Calligraphy is still an important art, and it is not a coincidence that the verb *kaku* can mean "write" or "draw, paint". It seems reasonable to suggest, too, that the population is in general more able to produce drawings and diagrams as a matter of course, more literate in interpreting them, and more likely to expect them to be an ordinary component of information presented on paper. It is clear from our data that Japanese instructions feature graphical devices both more frequently and more centrally in terms of the message of the accompanying text than do instructions in English. One example, taken from among many, is found in the comparison of the Mitsubishi VCR instructions in Japanese and English. Figure 2 shows the English instructions for simple recording of a video cassette, including instructions for recording from one channel while watching another:

**Recording**

**Basic use**

1. Load a cassette with the erasure prevention tab intact.
2. Turn ON the TV then set it to the video channel.
3. Press the CHANNEL buttons or the number buttons on the remote control unit or turn the CHANNEL dial on the VCR to select the desired channel.
4. Press the SP/LP button to select the desired tape speed SP or LP.
5. Press the REC button to start recording.
6. Press the PAUSE button to cut commercials or other material out of the recording. Press the PAUSE button again to resume recording.
7. Press the STOP button to stop the recording.
8. Press the REW button on the remote control unit or turn the SHUTTLE ring on the VCR left to rewind the tape.

The tape automatically rewinds when it reaches the end of the tape. (Automatic rewind mechanism).

**Note:**
- To protect a tape, after about 5 minutes in recording pause mode, the VCR will switch to stop mode.
- If you attempt to record on a cassette that has had its erasure prevention tab removed, recording will not begin and the cassette will be ejected, and the VCR will make a beep sound 7 times to warn of this.

**Recording one programme while watching another**

1. Select the VCR channel you wish to record and start the recording by pressing the REC button.
2. Select the channel you want to watch by pressing the appropriate channel button on your TV.
3. To check the picture during recording select the video channel on your TV.

*Figure 2: Recording: Mitsubishi VCR Instructions (English)*
The equivalent instructions for a similar product in Japanese, however, set out the basic steps in a way that incorporates the features of the VCR display panel into the instructional text. Figure 3 shows the recording information for the Mitsubishi VCR in Japanese.

Figure 3: Recording: Mitsubishi VCR Instructions (Japanese) (70% reduction)
Figures 2 and 3 are also useful in illustrating the fact that the dominance of the graphic medium is not confined to the presence or absence of diagrams: use of typefaces, displays, and other graphic devices for differentiating functionally distinct parts of the text are also predominant in Japanese instructions. By contrast, English-language instructions are generally text-based, with diagrams used to reinforce, rather than replace, textual material, and that textual material is itself more likely to be presented in a form that is differentiated orthographically in less sophisticated ways. Specifically, the English version marks no differentiation between levels of detail in the instructions being given. The Japanese text, on the other hand, divides up the business of the main task by means of a graphic device, and clearly differentiates main steps within that task; along the right-hand side of the page it includes refinements in performing the task that the user may wish to consult, but need not.

To show more clearly the differentiation between "main task" and "side-issues" in Japanese, and the lack of this distinction in the English text, Figure 4 gives the English text describing the use of the accidental erasure prevention tab (a tab on the video cassette that can be removed to prevent accidental re-recording). Comparison with the Japanese version in Figure 3 shows this information included down the right-hand margin in the diagram with the circle, among the additional information.

**Accidental erasure prevention tab**

Pre-recorded cassettes have their erasure tab removed to prevent accidental recording over their information. If there are any cassettes which you record and do not want to mistakenly record over, remove the accidental erasure tab. To re-record on a tape with the erasure tab removed, simply stick a piece of cardboard over the gap. Cassettes with the erasure tab removed will play automatically when loaded into your VCR. Your VCR will not record on a cassette with the erasure tab removed. This means that rental videos are safe from being accidentally erased.

![Accidental erasure prevention tab](image)

**Figure 4: Accidental Erasure Prevention Tab: English**

As a second example, we can consider the presentation of warnings in Japanese

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2 Multilingual instructions are often an exception to this: a company that is producing for an international market may use instructions that have very little text, producing a saving in translation costs.
and English instructional texts. First of all, it is far more common in the case of Japanese instructions to find warnings included in a specific section, as well as throughout the text. This section will contain warnings delineated from one another by graphical means (lines, bold typefaces, etc.). The importance of reading this section before using the appliance is frequently signalled by its being placed at the beginning of the text. In several of the texts we examined, warnings were also clearly differentiated into different classes. The two tables below illustrate this. Figure 5 shows the warnings hierarchy from a Tokyo Gas rice cooker; these instructions are particularly complex in layout. Each page has a section at the bottom with notes under various symbols to which a key is provided at the beginning. These symbols follow a hierarchy of seriousness in descending order: kinshi (forbidden/prohibited) actions which will result in accident or injury; actions that are abunai (dangerous) if not performed correctly; chūi (attention, care) points that need to be attended to to avoid damaging the appliance; and finally “handy hints”. Figure 6, from the hierarchy adopted in the Mitsubishi VCR manual, also demonstrates this prioritising of warnings: first come “danger of death” warnings; next are “care” points to avoid injury or damage to property; these are followed by unexplained “don’t do this on any account” points, “unplug before doing” points, and, finally, points in which the instructions must be carried out to the letter (no risk is specified in this category). Even in sets of instructions that do not have such finely-graduated systems of warnings, there are frequently distinctions between actions that might result in physical harm to the user, those that might result in damage to possessions (the object being cleaned, for example, in the case of a cleaner), and those that will cause damage to the appliance itself.

禁

火災や事故につながります。絶対おやめください。

あぶない!

取扱いを間違うと危険です。十分ご注意ください。

注意

機器をいためてしまいます。お気をつけください。

上手なご飯の炊きかた・機器の取扱いかたです。

3 The discussion here is limited to layout and structure of warnings; an analysis of the linguistic patterns of warnings will be the subject of a future paper.
Translation
Forbidden: Relates to fire or accident. To be avoided at all costs.

Danger!: Dangerous if treated/handled incorrectly. Please take good care.

Attention: Will damage appliance. Please be careful.

Tip: How to make good rice and use the appliance well.

Figure 5: Warnings Hierarchy, Tokyo Gas Rice Cooker

| △警告 |
| 誤った取扱いをしたときに、死亡や重傷などの重大な結果に結び付く可能性が大きいものを示します。 |

| △注意 |
| 誤った取扱いをしたときに、傷害または家屋、家財などの損害に結び付く可能性があるものを示します。 |

| ☒ |
| 絶対に行わないでください。 |

| ☢ |
| 電源プラグを必ずコンセントから抜いてください。 |

| 🚨 |
| 必ず指示に従い、行ってください。 |

Translation
Warning: Indicates high possibility of serious consequences such as death or serious injury if not treated/handled correctly.

Attention: Indicates possibility of injury or damage to house or household goods/furniture etc if not treated/handled correctly.

Do not do this on any account.

Be sure to unplug.

Do/carry out strictly according to instructions.

Figure 6: Warnings Hierarchy, Mitsubishi VCR (Japanese)

Although we have not yet attempted an in-depth study of the graphical distinctions between instructions in the two languages, certain features clearly distinguish among the graphical devices that are present. Beginning with diagrams, the first difference is one to which we have already alluded: the greater frequency of diagrams in the Japanese texts. It is rare in Japanese instructions to find a page without a diagram, and it is more often the case that
this diagram forms the focus for surrounding text. What was also often noticeable in the instructions we analysed, was that Japanese diagrams were allocated up to eight times the space that a corresponding diagram in an English instruction manual would be given.

Frequently, in the “labelling of parts” diagrams found in English instructions, the parts of the appliance were numbered, and these numbers referred to a key elsewhere on the page. We did not find this in Japanese instructions: when the function of the diagram was to identify the parts to the user, the labels were linguistic, not numerical. It does not appear that this can be attributed to the English labels being too long to include on the diagram, since in most cases they appeared to occupy the same space on the page as the Japanese textual labels which were presented in situ and therefore presented the information in a more immediately accessible way. Compare, for example, the two labelling diagrams from the Japanese and English Mitsubishi VCR manuals. Figure 7 shows the English key to the front view of the VCR machine. Perhaps because the manufacturer has chosen a small size for the diagram, labels are numerical, and refer to a key: the key itself refers readers onwards to pages elsewhere in the manual. Figure 8 shows the Japanese equivalent. Here, the labels are textual, and do not require a key for decoding.

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1 POWER button (with indicator) (See pages)........16
2 EJECT button..................................16
3 RENTAL PB button..............................21
4 Cassette loading slot..........................16
5 PLAY button..................................20
6 SHUTTLE ring.................................7, 19, 24
7 JOG/CHANNEL dial.............................7, 24, 27
8 STOP button..................................17, 20
9 PHONES LEVEL control.........................45
10 PHONES socket................................45
11 P|CTURE control..............................23
12 TAPE OPTIMIZER switch.......................17, 22, 23
13 MIX switch..................................48
14 REC LEVEL control...........................45
15 REMOTE switch................................7
16 INSERT button................................49
17 AUDIO DUB button............................48
18 Fluorescent display...........................8
19 O.K.PROG. button.............................15, 22, 29
20 RECORD/OTR button..........................17, 26
21 VIDEO IN ① socket...........................46, 49
22 AUDIO IN ① sockets..........................45, 46, 48, 49
23 MIC socket..................................48
24 PAUSE button.................................17, 25
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Figure 7: Front View, Mitsubishi VCR (English; 85% size)
Figure 8: Front View, Mitsubishi VCR (Japanese; 70% size)
When Japanese diagrams were labelled numerically, this was for the purpose of referring the user to a particular step in a procedure that they should perform, in a set order corresponding to the numbers. Figure 9 is an extract from a double page spread of the Mitsubishi VCR manual. The parts are labelled by name on the diagram, together with an indication of function, and the numbers, in large, clear typeface, correspond to the “steps to follow” on the facing page. For example, the video tape is labelled 1 and the relevant instruction is *Insert tape*. The numbers 2 and 3 each appear twice, referring to control buttons that are on the VCR deck and the remote control unit and to the relevant steps in the procedure (2: *press the record button*, 3: *press the stop button*).

This connection between diagrams and steps in a task is worthy of further comment, since it is rare or absent in the English instructional texts we examined. Diagrams in English more frequently serve to identify the parts of the apparatus involved in a textually-described sequence of steps. On occasion, the textual information will be supplemented by a directional arrow, for example, showing on the diagram the direction of movement of a switch or lever, as in Figure 10 below, taken from the Electrolux vacuum cleaner instructions. In the Japanese instructions, diagrammatic support will more frequently be provided for an entire sequence of steps. Optionally, too, that step sequence will itself be included in a larger graphical structure that involves the identification of parts in a complete diagram. An example of this step-wise substructure contained within a superstructure that is both identificational and procedural is given in Figure 11. The water tank and the steam button are indicated on the large centrally placed diagram, and the procedure for using each is given in the boxes labelled by numbers indicating the sequence to be followed.

We have already noted that diagrams in Japanese texts tend to be larger. It is also worth noting that they tend to be more inclusive: that is, they are more likely to reveal the whole appliance, even in schematic form, rather than just the relevant part. As Marcel and Barnard (1979) indicate, the inclusion in a diagram of the entire object is more likely to lead to successful comprehension or completion of task.
テープを見る (再生)

1 テープを入れる
2 再生ボタンを押す
3 停止ボタンを押す

Figure 9: Tape playback, Mitsubishi VCR (Japanese) (70%)
6. Checking the dust bag

Regular checking of the dust bag is essential as an overloaded dust bag will reduce your cleaner's suction. The front of the machine contains a small indicator. When this has become covered by a coloured slide the bag is full and should be checked and emptied or renewed at once.

To check the bag first disconnect the hose coupling. Lift at sides of lid and remove. Lift out dust bag.

NOTE: it is important that the bottom end of the dust bag is folded over twice before fitting the bag clip.

Replace the bag, ensuring it is properly located, and close lid.

CAUTION. Use only genuine Electrolux dust bags specifically designed for this cleaner.

Figure 10: Electrolux vacuum cleaner

In addition to the presence of larger, textually-labelled and procedure-related diagrams, Japanese instructions have a feature completely absent from their English counterparts: cartoons or caricatures of both user and product. As is well known, Japan has a long tradition of cartoons, or *manga* ("caricature, cartoon, comic strip, comic book, or animation" (Schodt 1983: 18)). Although British culture has become an avid consumer of *manga* for entertainment since the early 1980s, educational *manga* books have become a major phenomenon in Japan, covering everything from Buddhism to pension rights. These are an efficient means of presenting often complex information in an accessible way (see Jones 1989 for a discussion of the educational uses of *manga*). Cartoons are frequently, indeed almost invariably, present in the "warnings" section of Japanese instructions. Commonly in these cartoons, the appliance is depicted as an animate entity, with arms, legs, and facial features. It is shown with an unhappy expression in situations that would cause damage, or a beaming smile when being treated properly. Misusing or damaging this "animate" appliance will hurt it; encouraging empathy with the product protects it and makes sure it is used properly. Apart from the fact that use of cartoons is relatively common in forms of communication where they would not be expected in English, this
particular use, for personification of the appliance, may arise from the fundamental role that empathizing with others plays in Japanese communication, and the high degree of cultural value placed on it (Yoshino 1992: 12-17). Here, the principle is extended to the appliance. Figure 12 shows a typical range of functions for cartoons drawn from a variety of sources. 12.1, taken from the "warnings" section of the Rice Cooker instructions, shows the damage done to the cooker when placed on a heat source, while 12.2 is also a warning, depicting what will happen if you allow your child to poke objects into the cassette slot of the VCR. 12.3, also from the VCR manual but this time from the index section, shows a couple enjoying a read-through of the instructions for their new appliance. Finally, 12.4 shows some of the many uses to which a National Steam Cleaner can be put.
Figure 11: Parts Identification and Procedure, Cleaning Brush
(Japanese; 70% size)
Figure 12: Illustrative Cartoons from Japanese Instruction Manuals
Above, we have set out some of the most striking differences between the uses of graphics in Japanese and English instructions: the centrality of the role, the size, and the function of diagrams; the difference in graphical devices such as icons for levels of warning in Japanese instructions; and the appearance of cartoons. Two important conclusions flow from the difference in the use of graphics between the two languages. Firstly, it is clear that the centrality of diagrams and pictures in the Japanese instructions, and the predominantly textual nature of the English instructions, are likely to lead to differing reading strategies, not least the passage of the eye across the page: Japanese instructions are subdivided both vertically and horizontally, and it is by no means always the case that the information is to be taken in by scanning the page from top to bottom. It is frequently the case, as in the comic book, that the particular scanning strategy that the user needs to adopt will itself be indicated by graphical devices: numbering, arrows, or most frequently the obvious centrality of one element (diagram or text) demonstrated either by size, or choice of typeface, or both, and the relatively “satellite” nature of the rest of the information on the page. This is similar to the way that Japanese newspapers combine script in the traditional vertical, right-to-left format, and the western-style, horizontal left-to-right format. By contrast, the English instructions usually invite top-to-bottom reading, and diagrams are placed in such a way that they will fall naturally into the pathway of the reader adopting this strategy. Predominantly, the organisation of the Japanese texts required an orientation towards a “centre” where the focus of the message would be found, and “margins” which were reserved for additional information (cf. Kress and Van Leeuwen 1996); however, it was frequently the case that the focal centre was not actually dead centre on the page. The English texts, by contrast, tended to place the text to the left and diagrams to the right, although this did not seem to be motivated by any particular semiotic intent. Kress and Van Leeuwen (1996) have suggested that such organisation may be motivated by a graphical “given–new” structure akin to that found within textual information units, but that does not seem to be the case here—and is, indeed, hard to verify.

Methods for differentiating the importance, difference in function, or order of consumption of the elements of the text are therefore relatively limited in comparison to the Japanese texts, as a comparison between Figures 2 and 3 (from the UK and Japanese Mitsubishi VCR instructions respectively) above illustrates. The second point arising from the differing use of graphics is perhaps more crucial from the point of view of the document producer, and particularly the translator of technical documents from one language to the other. There is clearly a vast difference in the nature, amount, and balance of information that is conveyed in the two media between the two languages. That is, what might be a diagram in Japanese might be text in English, and vice versa. Where the boundaries between the two media lie, and what constraints might lead to some information being realised textually and other information graphically, is clearly beyond the scope of this research. What is clear, however, is that the production of instructions in one language using instructions in the other as a source text is
not a straightforward proposition. A more fruitful view of the process might therefore be in terms of the abstract representation of the knowledge to be conveyed for operating the appliance, and the specification of rules to realise that information in whatever medium being developed on a language- and culture-specific basis. Such an approach is being adopted in computer models for natural language generation (cf. Delin et al. 1994, 1996a, 1996b; Paris et al. 1994, and the work of the KOMET project, for example Bateman 1995a, 1995b), where language-specific principles are adopted for arriving at the correct linguistic form, rather than working on any mapping from one language to another. As the discussion above suggests, however, the capability for change of mode between languages, allowing for non-linguistic realisations of a given piece of information, is also necessary: steps towards such a development are described in Alexa et al. (1996).

4. Linguistic issues

In order to perform any kind of cross-linguistic comparison between texts, we need to examine deeper commonalities between the texts against which any variability in expression can be contrasted. As we noted in Section 1, a particular feature of instructional texts is that they realise a relatively small number of communicative intentions. Ciliberti’s work on communicative intentions (1990) sets out a group of “sub-texts” that compose “styles” which are found within instructions, where “style” is defined, after Leech and Short (1984), as “the way in which language is used in a given context, by a given person, for a given purpose”. We suggest that it is more useful to look at both deeper and more fine-grained semantic content as a basis for cross-linguistic comparison, since the definition of sub-texts on the basis of their function and the linguistic forms they contain is in danger of circularity when it comes to be used for any comparative purpose. Ciliberti’s suggestions, however, are useful in terms of their general exposition of the features of instructional texts, and for this reason we review them briefly below.

Ciliberti’s analysis describes three sub-texts that occur within instructional texts, as follows. First, she suggests the category of DIRECTIVE, which serves “to activate the reader, rather than to inform him or her” (1990: 301). This subtext can also have descriptive content, serving the function of pointing out to the user the result of, or the desirability of, performing the action. Second, she singles out the CATALOGUING subtext, which consists of a homogeneous “list of technical data or characteristics of the machine” (1990: 306). Finally, the third category is Ciliberti’s DESCRIPTIVE sub-text, serving to represent a new machine or apparatus to the user, or to comment on tasks that the user is performing, in order better to explain it.

When one looks at sub-texts in which more than one communicative function is served, things are however less clear-cut than Ciliberti’s categories imply, since
there appears to be a high degree of overlap between the characteristics of sub-texts. For example, the "directive" sub-text, which serves to activate the user to perform some action in relation to the apparatus, is often interspersed with information about how or why to perform the task (Paris and Scott 1994 contains a discussion of such information), or warnings about dangers that might arise. The following data is taken from our English corpus (EC):

(1) Automatic Cable Rewind

Pull out the amount of cable required. To rewind, grip the plug and hold it near the cleaner. (This is important to prevent the plug from striking the cleaner.) Depress the rewind pedal. REMEMBER: keep holding plug until cable is fully rewound. On those models with cable rewinds, the mains supply cable MUST be replaced by Electrolux Service Staff as special purpose tools are required.

This text comes from the section of the instruction manual in which the user is told how to use a vacuum cleaner, but it features not only the expected directive statements (pull, grip, hold), but also explanation (This is important...; special purpose tools are required), and a warning (the mains supply cable MUST be replaced by Electrolux Service Staff). Ciliberti acknowledges the mixed communicative functions that occur in the directive sub-text, and suggests that they are to be expected (1990:303):

The directives about procedure, which are typical of the directive sub-text, may [...] be mixed with other communicative "processes" or acts: with advice, descriptive parts having a commentative function, or normative directives. When this is the case, the directive sub-text often becomes a fuzzy sub-text which obliges the reader/hearer to modify his/her expectations [...] to define and re-define the portion of the text so as to identify its objective, its primary function. Directive sub-texts may then be a long way from homogeneous and monofunctional subtexts.

In fact, this "mixing" is so prevalent that it is tempting to question whether there is any usage that can be called "typical" of the sub-text, and if this is the case, it is difficult to see where the boundaries between examples of this and other sub-texts actually lie. We have found there to be very few uninterrupted portions of instructional text that display any single function or typical linguistic usage. Furthermore, in isolating sub-texts as a primary analytical category, cross-linguistic analysis becomes more problematic: since it is usage and communicative function that define the sub-text, it will be very difficult to establish a commonality between texts in different languages over which variation can be compared.

Our analysis, therefore, takes a rather different approach to the "sub-texts" approach adopted by Ciliberti. We establish only the most general notion of text segmentation at the macro-level, based on the instructions designers' stated
intention of what that portion of the text is intended to do: a section headed *Using your cleaner* is interpreted as instructions for use, a section headed *caution* or *remember* is taken to be a warning section, and so on. This vague characterisation is deliberate, since it accepts text spans as tokens of what they are culturally intended to be. We do not attempt a detailed linguistic characterisation of the features of any of these categories, since we acknowledge that they are loosely contrived by the technical writer and often repeat information from other sections, sometimes in identical form.

Communicative function of the information cannot easily be distinguished on the basis of where it appears in the text. For example, in the “remember” section in the Electrolux cleaner instructions, the user is reminded to *Renew both the filter pad and the motor protection filter pad regularly (two or three times a year).* This information also appears in slightly more detail within the instructions for use, under *Changing the motor filters*:

(2) Located behind the filter grille are two filters. It is recommended that the rear filter is replaced once a year and the front filter (nearest to Grille[sic]) replaced once every three months. To gain access to the filters […]

Whether the user decides to perform the action of changing a filter on the basis of this information as it appears in the “remember” section, or on encountering it within the “instructions for use” section, or indeed neither, is impossible to guess. While we take the role of instruction layout and sectioning into account in our discussion, therefore, we look to a framework that enables us to account for the functions of individual utterances on a clause-by-clause, phrase-by-phrase, or if necessary, word-by-word basis: the communicative INTENTION behind the utterance. In fact, intentions, too, are ambiguous in interpretation: many apparent directives are to be acted upon only if the user chooses, for example. What we gain from this more fine-grained analysis, however, is the ability to compare expressions of particular intentions across the two languages, without over-strict assumptions about the functions of the text-spans that these expressions are assumed to inhabit—which may, in any case, turn out to be language-specific, and therefore unsuitable for our purposes.

4.1. Directives in instructional texts

Within this general framework, we focus here on what might be taken to be the central function of instructions: asking, or telling, the user to perform actions, or not to perform them—that is, utterances realising directive intention. Ervin-Tripp’s (1976) framework gives us a broad notion of “directive”, which is roughly defined as a speech act that is interpreted as a request or command to act. It is

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4 Note that this approach gives us rather a different definition of “directive” from that employed by Paris and Scott (1994) in their discussion of instructions in English and French.
well documented in the linguistics literature that directive intention need not be conveyed by an imperative form in English (cf. Searle 1975, Ervin-Tripp 1976, *inter alia*), and Paris and Scott (1994) describe the large range of possible expressions for various intentions, including directives, in written instructions. Our analysis of the instructional texts selected showed a wide range of grammatical structures fulfilling the category of directive in both languages. However, the range of structures occurring in written texts differs significantly from that available in speech, for reasons examined below.

4.2. English

In our English data, we found 14 different forms realising directive intention, all of which were represented in the 136 directives taken from the eight-page Electrolux vacuum cleaner manual selected for close analysis. We will see below that choice of expression in written directives relies not on features of power and politeness—these features are more relevant for Japanese—but on the availability of a specific agent, the assumptions that can be made about the instruction user’s obligations based on the fact that s/he wishes to use the product, and the relationship between those obligations and the structure of the task in which the user is involved.

Many people expect the imperative to form the entirety or greater part of written instructional text, and indeed, straight imperatives proper accounted for 59 of the 136 tokens in our own small corpus of English, as follows:

(3) Lift at sides of lid and remove. Lift out dust bag.

Of these 59, seven instances occurred with *please*:

(4) [...] please contact your nearest Electrolux Service Centre.

Stross (1964, cited in Ervin-Tripp 1976: 31) notes an interesting observation associated with the use of *please* with requests from waitresses to cooks: *please* was used when the request was for an action outside the cook’s normal duties. A similar generalisation applies to written instructions: *please* appears in circumstances where the user is required to perform some action that is outside the concrete task being undertaken—that is, outside the main “plan” for the use of the artefact. Specifically, *please* is used either when the directive is metalinguistic, relating to the use of the manual itself (*please see figure 6; please keep this manual for future reference*) or when a user has to perform an action either as a result of

Paris and Scott’s framework treats as directive those speech acts that are likely to be realised by strong directives (cf. Sager *et al.* 1980), while weakly directive speech acts such as *recommend* or *instruct* would belong to Paris and Scott’s category of explanations.
the appliance going wrong or, in some cases, to prevent error (for example, five out of the seven cases of please in the manual selected for close analysis occurred within the service and spares section). Common directives are therefore cases like please contact your nearest Electrolux Service Centre, and examples such as those given below (from the Mitsubishi VCR manual):

(5) Please ensure that both your VCR and your TV are NOT connected to the mains supply while you make these connections.

(6) Please use the exclusive SECAM-VHS recorder in French SECAM broadcasting areas.

Note the oddness of please when interpolated into the following example, in which the action is central to a sequence that the user is committed to in order to use a VCR machine:

(7) Basic Playback.

1) *Please load a pre-recorded cassette.
2) Press the PLAY button to start playback.

Please in English instructions therefore appears confined to cases where the directed action constitutes an imposition beyond what the user is expecting to do in the course of his/her ordinary use of the product, either in terms of performing particular tasks, or in terms of navigating the instruction booklet itself: in all cases, it appears to be restricted to the strictly syntactic imperative form. As a corollary, a generalisation that can be suggested for imperatives without please is that they occur most often in the description of a series of actions that it is clearly within the user’s role to perform in the ordinary use of the appliance or artefact. For this reason, imperatives frequently occur in lists or numbered sequences in the body of the instructional text, as follows:

(8) To check the bag first disconnect the hose coupling. Lift at sides of lid and remove. Lift out dust bag. Replace the bag, ensuring it is properly located, and close lid.

Ervin-Tripp (1976: 32) also suggests that please is used as a marker of rank or age difference in situations where the imperative is the “normal form” for the directive. We would propose, however, that written instructions are an exception, as perhaps are all contexts of use in which such assumptions about speaker/writer and hearer/reader are unavailable or irrelevant. The imperative, even narrowly construed, is by far the most common form for directives in written instructions, but it is clear that the rank or age motivation for please is not indicated.
Ervin-Tripp (1976) extends the category of "imperative" to include those directives that include explicit you, as in you should turn right here. These are common in instructions in general, usually as recommendations for safe use of the appliance or, at their strongest, as warnings:

(9) These warnings are provided in the interest of safety. You must read them carefully before installing or using the appliance.

Another set of imperative forms common in instructions contain ensure, take care, make sure, or make certain as the imperative, prefacing an active or a passive clause describing a specific action. Di Eugenio (1993) terms these TC (take care) imperatives. As its content suggests, this form usually describes a constraint on performing an action safely:

(10) Always ensure when using your cleaner on the stair treads that you keep one hand firmly on the appliance.

The passive form additionally allows the agent of the action to be displaced (14 examples in this corpus), often for the purpose of allowing for a situation in which the user may be requiring a third party to perform the action for him/her. For this reason, the passive form occurs frequently in contexts outside the main task structure for operating the appliance; in descriptions of wiring, setting up, or mending the appliance, for example, where a warning or recommendation may be indirectly addressed to an electrician or service provider:

(11) Ensure that the lengths of wire inside the plug are prepared correctly.

The fact that British appliances have until recently been standardly supplied without wired-in plugs must account in large part for the presence of this construction, and the associated section of text, in many appliance manuals. This practice now appears to be on the decline as manufacturers have become obliged to supply appliances with plugs ready-fitted.

Many of the directives take a form that is less direct than the imperative, requiring inference from the reader to work out the action intended, or to infer some of the missing components of the directive (the agent, action, or beneficiary, for example). In our data, we frequently find a strategy that Ervin-Tripp (1976) describes as agent indirection. Under this strategy, formulated in the rule below
Any declarative or interrogative is to be interpreted as a command to do if (i) the agent is we, someone, or there is no agent, (ii) it refers to an action or activity within the obligations of the addressee, and (iii) in the case of we, it is directed to a subordinate.

For written instructions, indirectness is never achieved through the use of interrogatives, but many indirect declarative directives do appear. A large number of these (23 in this corpus, for example) rely on the user's inference to a likely agent, as the examples below illustrate:

(12) The old fuse MUST be replaced by a 13A ASTA approved BS1632 fuse and the fuse cover must be replaced before the plug is used again.

(13) The suction control will normally be kept fully closed to maintain maximum suction.

(14) After using proprietary carpet conditioning powders, it is recommended that the dustbag be changed.

These forms appear frequently as warnings, or as conditions on safe and careful use of the appliance. In instructions, agent indirection appears to convey to the user that the action is within their obligations: this may serve to cover the manufacturer in the case of litigation after an accident involving the appliance. The obligation may be discharged by means of the user getting someone else to perform the specified action, however, and the inference to agency allows for this: as with the use of passives in the category of imperative discussed above, the passive form is used here to allow the directive to apply to service providers, electricians, or other users of the appliance, as appropriate.

Although Ervin-Tripp's rule allows for it, no directives in instructions in English rely on the use of indirect we or someone to act as trigger for inference to the agent. Ervin-Tripp notes for English that the use of we is downward in rank, implying "pseudo-participation", as in (15) (ibid: 48, example 115):

(15) [Nursery school teacher]
   Let's take our naps now.

This form has quite a different currency in Japanese, where it does occasionally appear in written instructions, as discussed in Section 4.3. below.

Some indirect forms not only elide the agent, but presuppose the action to be performed by embedding it within a when or a by clause, as in (16) and (17) below:
(16) Release the hinged right-hand part of the Grille by moving the left-hand part a little to the left.

(17) When returning the hinged right-hand part to the upright, make sure that it is correctly located before replacing the dustbag and lid.

In each case, the action to be performed is expressed by a gerund, although for a rather different purpose in each case. By clauses describe the action that the user is to perform in order to achieve a higher-level goal (in this case, releasing the hinged part of the grille). The when clause in (17) presupposes that the action of returning will be something that the user naturally wants to do. In both cases, inference is required to work out both that the action should be done—although in practice, this information is frequently available from the form used to express the goal of the action—and who should do it. Cases such as these account for a further nine examples in this small corpus, although they are well-attested elsewhere. As Di Eugenio (1993), Vander Linden (1993), and Delin et al. (1994, 1996a) have shown, the use of these forms in clause pairings such as those above depends on the semantic relations that hold between the actions described. In (16), the two actions described (releasing, moving) are related in that the second will result in the first, so that the plan for releasing would have moving as an important part of its “body”. In (17), it is assumed that the user will know how to return the hinged part, but a constraint on how to do it is stated in the subsequent clause. In both cases, syntax, ordering of clauses, and inference about the task at hand all play a role in helping the reader decide which linguistic form, if any, conveys the detail of the task to be performed, and which parts describe higher-level goals, preconditions, or constraints on the successful performance of that task. For a fuller description of the interactions between the semantics of the task, the available syntactic forms, and the influence of choice of rhetorical relation, see Delin et al. (1994, 1996a).

Finally, and perhaps least directly, the user may have to infer what has to be done on the basis of a state of affairs that s/he is informed must hold. The directive in (18), for example, tells the user that if this situation is not true, s/he must activate a plan that renders it true (1 token).

(18) [replacements] must be of the same colour as indicated by the coloured insert on the base of the plug.

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7 This “purpose” function of by-clauses is discussed at length in Di Eugenio (1993) and Vander Linden (1993), both in relation to consumer product instructions in English. A more general overview of the relationship between rhetorical relations such as the “means” relation commonly conveyed by a by clause, and speaker intention, is given in Delin et al (1994). A comparison of purpose expressions in English and Spanish instructions is provided in Murcia and Delin (1995).
In a similar vein, the action that is to be done may be communicated by means of a nominalisation (three tokens): for example, *regular checking of the dustbag is essential*. Both forms have the force of a warning or advice for safe use of the appliance, and appear with frequency in the “warnings” section of the instruction manual, as well as conveying safety constraints on the performance of other actions, perhaps expressed by imperatives.

This brief analysis of English directives in written instructions has shown that imperatives, while not exclusive realisations of directive intention, are nevertheless just as popular as might be expected. *Please* was found to be used for metalinguistic instructions and for tasks beyond the main task plan associated with the artefact. However, no benefit was assumed to accrue to the instruction-giver at any point: actions, even those signalled by *please*, are presented as being to the user’s benefit only. A second popular strategy was to use declaratives, *by*, *or when clauses which*, *by requiring simple inferences on the part of the user to fill in agent or action*, were the forms preferred for indirect directives. Agent indirection was also available through the use of passive forms.

It seems clear that the choice of form in English written directives is not motivated by the desire to allow the addressee “room to manoeuvre” for reasons of politeness, including the need to avoid embarrassment in the case of non-compliance. Neither is it linked closely to the selection of a form to suit the power-relation that holds between the participants, unlike spoken interaction. Instead, as would be the case with any non-synchronous medium, the social features of the occasion of use are stereotypical and fixed at the outset. It is assumed that the user will want to use the appliance or artefact correctly and safely, and this commits him or her to an assumption that s/he will benefit in carrying out the instructions. In contrast to the situation in the spoken interactions, no benefit is assumed to accrue to the instruction-giver, an idealised figure who is neither completely identified with the producer of the appliance nor with the writer producing the instructions. This rules out the choice of forms which focus on speaker/writer as beneficiary, and limits, in practice, the degree to which a directive can be seen as an imposition on the addressee—and therefore the polite forms that would be required to mitigate such imposition. Finally, and perhaps again because ultra-polite forms are not needed given the social parameters, the inferences that users are required to make in order to deduce directive intent from an inexplicit form focus not on inferring the existence of a directive, but on inferring its missing parts—agency and specific action.

If these parameters are fixed throughout, what causes variation in directives within written instructions in English to happen at all? In particular, why is indirectness a feature of these directives—why do forms other than imperatives appear? Firstly, as we have seen, the choice of expression appears to be sensitive to whether the required action is construed to be outside the set of actions that the user can be seen to be committed to as a result of having bought the appliance. Sending for spares or for service, for example, or paying close attention to the
instructions, is assumed to be at least potentially outside this set of obligations and therefore likely to be prefaced at least with *please*. Secondly, and relatedly, choice of expression takes more fine-grained elements of the structure of the instructional text into account: for example, recommendations and warnings are more likely to contain indirect forms than are directives that are located within the central task plan for the use of the appliance. Indirectness may also result from genuine indeterminacy of agent, rather than as a polite hedge: in some cases, there may be more than one likely user of the appliance. In others, the directive may apply to either the user or to a service provider, fitter, or electrician. Agent indirectness allows for a mismatch of identity between the instruction-reader and the agent of the specified action. Finally, indirect forms containing presupposed actions, such as *by* phrases, were seen to be a result of the interaction of semantic and rhetorical factors governing the description of action pairs, as is the case when the presupposed action generates another action that is the higher-level goal of the reader.

It is perhaps strange, finally, that so many forms in written instructions are indirect in nature, given the expectation that any reliance on inference is more likely to lead to error and possibly to damage or even personal injury. We can only suggest for the moment that inference in the context of instruction use is sufficiently constrained: firstly, by the frequent presence of the action to be inferred in the form of verb-based linguistic items such as a nominalisation or gerund elsewhere in the directive; and secondly, by other means such as the visual cues provided by the physical state of the appliance, and that indirectness serves such a valuable function in the ways outlined above that any resulting indeterminacy is seen to be cost-effective in terms of the communication as a whole.

4.3. *Japanese*

In order to compare directives in Japanese and English, some background information on the Japanese language and its norms of communication is essential. All speech acts in Japanese vary along two interrelated axes: the axis of ADDRESS, which relates to linguistic distance or formality, on the one hand, and the axis of REFERENCE, relating to degree of respect, on the other (see, for example, Miller 1967: 269-307). Differentiation along the first axis is most notable in verb endings and in the copula: in broad terms, the plain or dictionary form (-*u/-ru verb endings, and *da* copula) is used in spoken language between people of similar status who know each other well, or from superior to junior. The polite verb forms (-*masu* endings, and *desu* copula) show linguistic distance or formality;

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* The of plain or polite forms from superior to junior is a matter of choice, depending on such factors as the gap in relative status, situation, and individual preference.
thus they are used between people who do not know each other well, or in formal settings (for example, among work colleagues), and from junior to superior. In the written language, plain forms are used in books, newspapers and other "public" writing, and are a neutral form addressed to no particular audience. This style was developed in the *genbun itchi* (unification of speech and writing) movement of the late 19th and early 20th centuries, and includes a particular form of the copula (*de aru* copula plain form). In contrast, polite verb endings (*-masu* endings) do occur in written language, but only in certain contexts. They are almost ubiquitous in letters, where the writer is addressing a particular person. They occur even in letters between family members and close friends who would use plain forms in speech; physical distance seems to outweigh intimacy in such cases (although the writer may also use plain forms within a text that is written in polite style overall).

Consequently, on the occasions when polite verb endings are used in formal written texts, but the audience is anonymous, their appearance can be taken to indicate that the writer wishes to establish a more personal relationship with the reader, and it is this usage that occurs in instructions. Although instructions are written, they require actions and compliance from the reader and therefore seem to form a specific sub-type of written language that is subject to the constraints linked to addressing the reader as an individual.

The second axis of variation controls the use of honorific language (*keigo*) for which Japanese is well-known. This system of honorifics comprises special verbs and other lexical items, verb forms, and honorific prefixes; selection from this repertoire depends on the relative status of those involved and the extent to which each wishes to show respect, by using language to exalt the referent (respectful) or to humble him/herself or his/her in-group (humble-polite).

Any speech act in Japanese requires selection of an appropriate level of language on both of these axes. Given the producer-customer relationship, we would expect the use of polite verb forms and of respect language in instructional texts. Interestingly, however, we find an unexpected degree of variation throughout the instructional text: clearly, selection along the two axes described is not fixed and invariant, even within the same text. Usage seems to vary in relation to a number of factors, including content, the point in the task structure, the obligatory or optional nature of what the user is being asked to do, and whether instructions are affirmative or negative. It seems that a degree of

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9 See Twine (1991) for more on the *genbun itchi* movement.

10 See Carroll (1991) for a discussion on the use of polite forms in local government literature and communications with the public.
politeness is linked dynamically to the structure of the task underlying text production in Japanese, rather than being a pre-set factor, as we saw to a lesser extent in English with the use of please and the occurrence of indirect forms.

The three Japanese texts that form the focus of this paper contained thirty-seven different grammatical structures to express directives, a far higher number than in the English texts. This difference is partially accounted for by variations in the level of politeness and respect language: eight forms are variants solely in terms of level of politeness/linguistic distance or respect (that is, plain or polite verb forms, neutral or honorific lexical items and structures), and analysis of these variations accordingly forms a large part of this section. A total of 285 directives were selected from the whole text of the Mitsubishi VCR manual (ninety-one pages long), and each different structure was recorded. As might be expected, this manual contained the widest range of different structures (thirty, as compared to nine in the Osram torch text, and twenty-two in the National steam cleaner text). The length of the text may, of course, contribute to the likelihood of the writer searching for novel forms of expression, leading to an increase in the number of forms used, but all of the forms found here were attested elsewhere in the corpus. Furthermore, it is clear that choice of directive form is not simply a matter of random selection to add variety. Closer analysis led to some interesting findings about the contexts in which each of these structures occur and allows us to propose some necessary conditions for the choice of particular structures and particular politeness levels.

As stated above, we concentrate on positive directives in this paper: actions that are required or suggested rather than proscribed. The most frequent forms are as follows:

Request
- -te kudasai [please V]\(^{11}\)
- -o V kudasai [respectful please V]

Connective\(^{12}\)
- V-te [V and.../ (by) Ving...]

Infinitive (*renyōkei*)\(^{13}\)

\(^{11}\) V = verb.

\(^{12}\) This form is sometimes called the gerund, but is not totally equivalent to the gerund in English.

\(^{13}\) This term refers to “a form which indicates the taking place of an action or a state without referring to its existence or occurrence. Since the infinitive is used in various contexts with various specific meanings it is impossible to give a useful translation for the forms apart from such contexts” (Miller 1967: 317)
V(-masu) eg mawashi [V and .... ]
Non-past declarative
a) -u/-ru ending [plain affirmative]
b) -masu ending [polite affirmative]\(^{14}\)
Collective address [tentative form (suiryôkei)]
- shiyô [plain] (let's V)
- shimashô [polite]

Common to all of the above forms is variation in terms of plain/polite and neutral/respect language. Perhaps the most obvious factor that determines selection of plain or polite forms of the various structures is that of location in the text. Throughout the texts, polite (-masu) verb forms are generally used within the main body of the text, often in elaborated constructions (for example, multi-clause sentences containing not only directives but explanations for why the action should be done). Plain or dictionary forms (-u/ru), in contrast, are limited to headings and short, unelaborated phrases in the body of the text. Although the latter are often complete grammatical sentences in their own right, they are marked as phrases or headings by the omission of the full stop that marks a complete sentence. Thus headings and key points are marked grammatically as well as graphically. The following examples are from the Mitsubishi VCR text. In (19) below, a heading, the plain verb form is used without a full stop, while in (20), from the main body of the text, the polite verb form and full stop appear:

(19) [heading in large type]
Terebi o bideo senyô channeru ni awaseru
'[subject deleted] sets television to video channel'

(20) [non-heading, main body text]
1 mata wa 2 channeru ni awasemasu.
'[subject deleted] sets to channel 1 or 2.'

Both of the above examples are non-past declarative forms. The subject is not stated, but this is unmarked in Japanese: although the subject is potentially ambiguous, in reality it is clear from the context; here, the subject is clearly the user.\(^{15}\) In contrast, agent indirection in English is a strategy. In his discussion of

\(^{14}\) Traditional Japanese grammar describes a) as dictionary form (shûshikei), b) as continuative base renyôkei + polite suffix -masu.

\(^{15}\) See Tsujimura (1996: 212–215) for an analysis of this phenomenon, termed "null anaphora".
commands and requests, Martin (1975/1987: 966) mentions such use of simple declaratives for commands, but this is very restricted in speech. In contrast, this usage is very common in Japanese instructional texts: in those that we analysed closely, it ranked first or second in frequency. The declarative form, with plain or polite ending, appears to be analogous to the use of the infinitive in French or German instructions (cf. Delin et al. 1994). It appears that the use of the declarative, using a transitive verb, is largely limited to positive actions; negative directives tend to feature request forms.

One of the most common forms of directive in all three texts is in fact some form of request, that is, the polite imperative form (-te kudasai). Examples from the instructions for the Osram torch include:

(21) Tōbu o hantokei hōkō ni mawashite kudasai.
    ‘Please turn the top section in an anti-clockwise direction.’

(22) [..] atarashii ranpu o setto shite kudasai.
    ‘Please put in a new bulb.’

Once again, politeness varies between the neutral -te kudasai form and the respectful o- verbal noun kudasai form. Here, the key determining factor in selection appears not to be the physical location in the text, but the extent to which the action being requested is central to the operating of the appliance: in other words, its optional/obligatory nature. The above discussion on English directives argues that the polite request form please occurs only when the reader is being asked to do something beyond what is necessary to operate the appliance, or in a metalinguistic context. In other cases, the imperative or other structures are used. The situation is rather different in Japanese; the V-te kudasai structure manifests the minimum expected level of politeness to a stranger and is therefore unmarked in this context. The command/imperative form, for example, mawase (turn) is very blunt and its use in speech is correspondingly limited; it does not occur at all in written instructions. Nor does the form infinitive (renyōkei) +nasai (imperative of respectful verb nasaru), which is between the -te kudasai and imperative forms in the hierarchy of politeness. Thus a structure usually translated into English as please appears to be a functional equivalent of the English imperative in Japanese written instructions.

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16 Japanese grammatical terms do not equate directly with English equivalents. An alternative terms for the V-te kudasai form is ‘weak imperative’ (MacClain 1981: 56); Makino and Tsutsui (1986: 210) describe it as the combination of the polite imperative form of the honorific verb kudasaru used as an auxiliary verb with the -te form of verbs. According to Martin (1975/1987: 963), “the most common way to make a request is to ask it as a favour”; the notion of “favour” is implicit in the semantics of the verb kudasaru (respectful verb of giving).
The respectful structure, o- verbal noun kudasai (please honorific prefix verbal noun), shows a higher level of respect than the -te kudasai form. In the Osram text, it appears only once, in a context parallel to those where please Vis used in English: kono setsumeisho o o-yomi kudasai (please read these instructions). In the National steam cleaner instructions, both the V-te kudasai and o verbal noun kudasai or o /go- kudasai (variation between the latter two is a matter of lexicon) forms occur frequently (13 of the former, 10 of the latter). Examples of respectful requests include:

(23) [...] o- kaiage hanbaiten ni go- sōdan kudasai.  
Please consult the shop where you purchased the item.

(24) Go- fumei na ten wa, o- motome no hanbaiten mata wa, moyori nashonaru shōhisha go- sōdan sentai ni nasen toimase kudasai.  
If anything is unclear, please enquire at the shop or your nearest National customer service centre (see separate list).

All of these instances of respectful constructions occur in contexts where the reader is being asked to do something beyond what is necessary to operate the appliance, as in the English use of please. The Mitsubishi VCR instructions follow the same principle. It therefore seems that the Japanese V-te kudasai and o- verbal noun kudasai forms to some extent map onto the English imperative and please request forms in their usage in instructions.

The length of the text appears to influence the dominance of either the declarative or polite imperative/request form (neutral or respectful). The -te kudasai form dominates in the shorter texts. It was by far the most common in the single page Osram torch instructions, accounting for 9 of the 24 directives. In the eight-page National steam cleaner instructions, there were 13 instances of this form, and 10

\[17\] Both o- and go- are variants of the same honorific prefix, determined by the noun to which they are attached.

\[18\] N = noun.
of the respectful form, together accounting for just under one-third of the total of 74 tokens. In contrast, the ninety-one page Mitsubishi VCR text contained 51 instances of -te kudasai and only 15 of the respectful form, approximately one quarter of the total of 179 directives. We do not have a full explanation for this tendency: we can only suggest that the repetition of both the marked and unmarked request forms can become overpowering in a longer text, hence the dominance of the declarative form in longer instructions.

As in the English texts, connective\textsuperscript{19} (V-te [V and.../ (by) Ving...]) and infinitive (V(-masu) e.g. mawashi [V and .... ]) verb forms, whose functions overlap, also occur. The -te form in the first clause commonly means that the action in the second clause is to be achieved by means of the action in the first. The following example is from the steam cleaner instructions:

\begin{enumerate}
\item[(25)] \textit{Tanku o hontai kara hazushi, yoku futte, mizu o sutete kudasai.}
\end{enumerate}

'Remove the reservoir from the body, shake well, and empty the water out.'

Here the water is to be emptied out by the action of "shaking well", and the instruction is accompanied by a diagram of a hand holding the reservoir and water drops falling from it with a double-ended arrow indicating a to-and-fro motion. The infinitive (V and (then)) is used to describe a series of actions or of co-existing states/actions, although it is frequently replaced by the -te form in speech. In instructional texts, it indicates one step in a series of actions, and parallels the use of by clauses in English in describing an action that must occur in order for the higher level goal of a later clause to be realised.\textsuperscript{20} This is the case in the above example: the infinitive form hazushi (remove) is used for the first action required to accomplish the goal of emptying the reservoir. Further analysis of the relative distribution of these overlapping forms is needed to elucidate the factors determining their selection. Their occurrence and distribution vary considerably, apparently in relation to the length of text. Even combined, the two structures account for a smaller proportion of the selected directives in the VCR text than might be expected: just over one-tenth of the total 179 tokens, with the -te form dominating. In contrast, they total approximately one-fifth of the 74 steam cleaner directives, evenly distributed between the two forms. The

\textsuperscript{19} cf. English gerund.

\textsuperscript{20} These forms are clearly influenced by the semantic relationships that hold between action pairs in the underlying "message" of the instructional text. They appear to discriminate between the relationship of GENERATION (in which one action automatically generates the other) and that of ENABLEMENT (in which one action creates the conditions necessary for the other, but does not automatically generate it; cf. Goldman (1970)). For a discussion of how these relationships are realised in different languages, see for example Gröte (1995), Delin et al. (1996).
highest total was in the shortest text, the torch instructions, where the connective form accounted for just under one-tenth, and the infinitive for approximately one-fifth of the total number of 24 directives. It may be that semantic factors, such as the relative simplicity of operating a torch, are reflected in the straightforward step-by-step sequential nature of this pattern and predispose its selection. It is also true that the lengthy VCR text is the most sophisticated in terms of range of linguistic structures and graphic features; there is thus a more even distribution of grammatical forms, with none dominating to the extent found in the other texts.

Where temporal expressions occur, these clearly indicate that one action needs to take place before another (V mae —“before V”), or after another (-te kara, V ato—“after V”). Before clauses are particularly frequent in general warnings, where the necessity of an action taking place before any danger may arise is paramount; for example, from the steam cleaner text:

(26) O-tsukai ni naru mae wa, kanarazu kōdo o tenken suru.
    ‘Be sure to examine the flex before using.’

After clauses may also occur in such contexts. The following example, again, from the steam cleaner instructions, combines the safety aspect with the idea that this is one procedure, split into a number of actions that must follow a prescribed sequence:

(27) Sashikomipuragu o nuite, hontai o samete kara, hokan shite kudasai.
    ‘Unplug, and store after allowing the body [of the cleaner] to cool.

The above discussion of the request form focused on the selection of neutral or respectful variants relating to the extent to which the action is central to the task plan. However, there is another aspect to the selection of respectful lexicon and structures in instructional texts: recognition of the imposition on the consumer. The concept of reciprocal benefit and debt is central to the functioning of Japanese society and language, and is influential even in instructional texts, where it might be assumed that the relationship is one-way and the consumer the only beneficiary. Example (26) is taken from the National steam cleaner guarantee:

(28) Kaki ni shitagatte shirabete itadaki, naorain toki wa, shōhin ni hoshōsho o soete okaiage no hanbaiten ni gojisan kudasai. Hoshōsho no kisai naiyō ni yori shūri shimasu.
    (Check [potential problems and solutions] below, and if the cleaner still
    does not work, please take it, together with the guarantee, to the shop
    where you purchased it.)

The first clause uses the humble-polite verb *itadaku*: the manufacturer receives the benefit of the customer’s checking carefully before returning the item. The honorific prefixes *o* and *go* are used with “purchase” (*okaiage*) and consultation
Interestingly, the neutral verb (polite form) _shimasu_ combined with _shūrī_ (repair) “we will repair”, is used where one might expect its humble-polite equivalent, _itashimasu_. This humble-polite variant, _shūrī itashimasu_, does appear in the guarantee for the VCR, but there is a revealing distinction between the phrasing for the conditions of repair within the guarantee period, and beyond it, when repairs are available for a charge. Both could be translated into English as “we will repair”, but the Japanese distinguishes the situations by using an even more polite structure for the first, where the imposition on the consumer is greater:

(29) **Hoshōkikanchū wa ... hanbaiten ga shūrī sasete itadakimasu.**
    (Within the guarantee period... the shop will repair it.)

The structure _sasete itadakimasu_ could be translated literally as “we will be permitted to repair it” or “we will receive the favour of your allowing us to repair it”. The structure combines the causative with the humble verb of receiving and is used as a polite way to request or assume permission (Martin 1975/1987: 599). This compares with the more straightforward, but still polite, structure used to refer to what happens if the product breaks down beyond the guarantee period:

(30) **Hoshōkikan ga sugite iru toki wa [... ] go-kibō ni yori yūryō shūrī itashimasu.**
    (When the guarantee has expired... if you so wish, we will repair for a charge.)

Although the difference could simply be put down to a wish to avoid repetition, we surmise that it further indicates the manufacturer’s recognition that having to return the product within the guarantee period represents a greater imposition on the consumer than it would be when the product was older and might perhaps be expected to break down. Thus distinctions in the level of imposition on the consumer are reflected in a hierarchy of respectful language patterns.

However, this does not seem to be a universal rule: two other National products, a VCR and a dish dryer, use _shūrī itashimasu_ for both of these conditions. It therefore does not seem to be a case of “house style”, and it may be that the writer of the Mitsubishi VCR was particularly sensitive in his/her language use. Analysis of a larger corpus would be necessary to clarify the issue.

A further issue arising in Japanese is that of the choice between COLLECTIVE versus INDIVIDUAL address. Collective address, such as is familiar in requests on public transport for people to give up seats to those needing them, uses a collective volitional form (“let’s V) [V-mashō verb forms], for example: _Otoshiyori, karada no fujiyū na kata ni seki o yuzurimashō_ (“Let’s give our seats to the elderly and disabled”). This appeals to the passenger to act as a member of a common in-group for the benefit of the whole community. The straightforward polite imperative V-te _kudasai_ (please V) is grammatically possible, but the inclusive
form is preferred. The English equivalent, Let’s V can also be used with the functions of suggestion or command, but, as Ervin-Tripp points out, the use of we in English instructions is downward in rank and implies “pseudo-participation” (Ervin-Tripp 1976: 4). In the above example the participation is indeed “pseudo”, not actual; however, it does not appear to have the sometimes negative, even patronising, overtones of its English equivalent. Rather, it appeals to the individual to identify with the larger group, society, and to act in its best interests. This collective volitional form also appears within written instructions, but rarely and within very limited contexts. It appears in its plain form in major section headings (in the contents list and the text itself) in the Mitsubishi VCR manual, for example:

(31) Saisei ya rokuga o shiyô.  
(Let’s record and play back.)

(32) Bideo o motto katsuyô shiyô.  
(Let’s make more use of the VCR.)

(33) Tsukau mae ni junbi o shite okô.  
(Let’s prepare before using the VCR.)

In addition, it appears (sometimes repeated from the heading) in its polite form in introductory explanatory sentences, for example:

(34) Saisei ya rokuga o hajimeru mae ni, bideo no eizô o terebi ni utsushimashï.  
(Before starting to record, let’s display the VCR picture/image on the television.)

However, its use seems to be limited to these introductory contexts, signalling the start of an explanation of a major activity in the use of the machine. It does not appear in either of the other two main texts we analysed, but is also present in some other sets of instructions. It appears twice in a Sony camcorder manual, again, in an “introductory” capacity, under the heading setsumeï (explanation), for example:

(35) Satsuei no mae ni kanarazu tameshitori o shi, seijô ni kiroku sarete iru koto o kakunin shimashô.  
(Before filming, let’s be sure to try it out/make a test recording and make sure that it’s recording properly.)

In contrast to its use in “public interest” requests, as described above, complying with the suggestions made in this instructional text would benefit only the consumer concerned, rather than the group or society as a whole; the underlying rationale for its use must therefore be rather different. It is perhaps a way of periodically establishing an “in-group” relationship with the reader/consumer,
as well as providing variety in a lengthy text. As in English, its overuse might seem coercive, and its use is correspondingly limited. Further investigation of a larger corpus is needed to clarify the conditions for and restrictions on its selection.

In summary, then, we have in this section isolated the main groups of directive forms used in the Japanese instructional texts in our corpus: the request forms, connectives, infinitives, declarative forms, and collective address forms. We found a range of factors were involved in their choice:

**Positive or Negative:** Positive directives tended to feature declaratives (non-past declarative forms), while negative ones favoured request forms;

**Text Length:** Long texts favoured declaratives, while short ones favoured requests;

**Action Relationships:** Connectives and infinitives were used for making clear the relationships between actions in a series; and

**Textual Signposting:** Collective address forms were used for headings and summary introductory statements at the beginnings of explanations.

The greatest part of the discussion, however, concerned variation in politeness level, and in honorific versus neutral language, which varied throughout the text. Variation appears dependent on which of the basic forms is involved. For statements, we found that textual position—body or heading, for example—was most central to choice of politeness level. Variation in request forms, however, was influenced by the perceived benefit of the action to consumer or producer. This, in turn, is crucially related to the role of the particular action in relation to the task plan: central and obligatory in the achievement of the user goal, or optional; integral to the normal use of the equipment, or exceptional, such as in cases of breakage or specific maintenance needs.

5. Conclusion and implications

This study is based on a small number of texts and focuses on one particular function, that of directives, which fulfil the central purpose of instructions—enabling the reader to use the appliance. This pilot study has revealed significant differences between instructional texts in English and Japanese, both at the micro-level of linguistic structures and the factors that influence their selection, and at the macro-level of the physical structure and layout of the texts, particularly the balance between text and diagrams.

We believe that the greater visual literacy prevalent in Japanese culture, based partly in the writing system and partly in a long tradition of pictorial documents being accorded a high cultural value, makes graphical modes of expression at least as natural a choice in document production as text. British manuals, on the
other hand, still tend to include pictures as illustrative of a dominant text, reflecting a lower cultural value on illustrated documents and a lower general proficiency in producing them. While this picture is slowly shifting with the growing ease of inclusion of illustrations through desktop publishing as well as the general growing influence of "magazine-style" presentation, there is still less sophistication in the British manuals in the use of graphics to differentiate levels of detail in instructions and to delimit different speech acts, such as positive directives and warnings, from one another. Much research remains to be done on cultural influences on layout: we have not, for example, gone into the precise nature of the relationship between graphics and text, examining aspects such as the extent to which content is repeatedly or discretely allocated between the various media. We have so far only alluded to differences in patterns of document navigation and in factors in page design, such as the use of left and right sides of the page, centre and margins, which we believe may differ systematically between cultures. Such issues demand systematic analysis.

While much also remains to be said about linguistic contrasts between instructions in the two languages, we did find differences in the factors conditioning choice of directive intention. We found that English favoured direct imperatives without polite mitigation: please was only used when the action required was outside the normal task plan of the appliance or was metalinguistic, and even then there was no sense that the action would afford any benefit to the instructor. Many of the directives were indirect, consisting of statements, or when or by clauses, all of which required inferences on the part of the user to work out some element of meaning. In Japanese, variation appeared to be due to different factors. While many of the variations we found were of course due to the level of politeness or honorific language and could therefore be seen as variants of the same base form, these differences are nevertheless worthy of note. First, we found that simple statements and request forms were the most commonly used forms in Japanese. Variation in request forms was due to the perceived benefit of the action shifting from user to the instruction-giver in cases where the action was beyond the user's obligation. Variation in form for declarative directives, on the other hand, was more due to textual positioning: an interesting issue, since this suggests ways in which form is sensitive to layout. Variation between plain and polite declaratives was differentiated by use as a heading (plain form) or in the body of the text (polite form). Textual positioning in headings and introductory sections also allowed collective address to be used, suggesting a further relationship between the overall "rhetoric" of the page and syntactic choice. Second, the choice whether to use a request form or a declarative at all seemed to be based on a stylistic choice at least partly dependent on text length: long texts favoured declarative forms, while shorter ones featured more requests. It seems to us that this cannot be the basic explanation; further research is required to establish more fundamental determinants of this choice.

It is clear from the above discussion that instructional texts in different languages operate in a matrix of sociolinguistic and cultural expectations, ranging from
the amount of information and the order and physical layout in which they are presented, to the level of politeness at different points in the text and the nature of the producer-consumer relationship. We see the most important indication of this study, however, to be the implications for the division of labour between linguistic and graphic devices. We have all been on occasion amused, if not bemused and confused, by badly translated instructional texts, particularly between Japanese and English. If we view the issue at hand as one of meaning representation, rather than as a textual translation problem, we may be nearer a solution: it seems that, beyond any linguistic difficulties, the presentation of information between the two languages is simply differently distributed between text and graphics. Therefore, any theory that aims at achieving pragmatic equivalence between the two languages must include both text and graphics within the semiotic resources it has at its disposal.

References


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Appendix

The instructional texts selected for close examination in this study were as follows:

English:
- Uniross Battery Charger, Hawker Siddeley
- 'Chic/Classic' Vacuum Cleaner, Electrolux
- Mitsubishi Video Cassette Recorder, HS-M70V(ED)

Japanese:
- Osram mini halogen torch
- National steam cleaner NQ-100
- Mitsubishi VCR HV-BF600

We also made reference to the instructions for a Tokyo Gas Rice Cooker.