# Gender Imbalances in Two Japanese－English Word－Books 

二冊の和英辞書類におけるジェンダーの不均衡

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#### Abstract

【ABSTRACT】 Presented here is a quantitative analysis of the presence of males and females，in two dictionary－type books used for the instruction of Japanese to speakers of English， based on the occurrence of third－person singular pronouns in the English translation of Japanese phrases and sentences．The English pronouns are further classified according to grammatical case and the presence or absence of overt gender reference in the Japanese source expression．Results indicate that both books similarly restrict the occurrence of feminine forms，and that the dominance of masculine forms increases as a result of translation into English．The results confirm the grammatical hierarchy of case（nominative，genitive，and accusative occur in descending order of dominance）and that there are notable differences in the numerical occurrence of masculine and feminine pronouns according to grammatical case and the presence or absence of reference to the opposite sex．


## 【要旨】

この論文は英語を母国語とする人々への日本語教授に使用される二冊の辞書類における男女の扱いの違いを数量的に分析したものである。日本語の語句や文章を英語に翻訳する際に使用される第三人称単数代名詞の使用頻度に基づいて論を進める。英語の代名詞は文法の格 と日本語の元の表現においてジェンダーへの言及がなされているか否かによって更に分類さ れる。調査の結果は両辞書ともに女性形の使用頻度が同じく限定されていて，また日本語を英語に翻訳する際男性形の支配的立場は著しく増大する。様々な結果から格（主格，所有格，目的格などはその使用頻度が次第に少なくなる）の文法的優劣を確かめることができる，そ してまた文法的格によって，また両性に言及されるか否かによって男性代名詞と女性代名詞 の使用頻度は著しく異なる。

This article presents the results of a comparative investigation of the presence of males and females in two dictionary－type books used for teaching Japanese to speakers of English．The study presented here is restricted to documentation of the use of gender－bearing pronouns found in the two books，with English translations providing the trigger for selection of data．What is presented here is a portion of a broader investigation of gender in language instruction books．The purpose of such research，however，is not the documentation of gender bias per se，but rather
investigation of the patterns of expression of that bias. Investigation into patterns of discrimination, begun in 1989, led to the formulation of "the 60:40 Principle" (Lupardus, 1995), which was first presented (Lupardus, 1993) consequent to research on discriminatory patterns observed in the employment and promotion of males and females (in corporations and in educational institutions) and in the employment/ placement of local and non-local employees (in resort hotels). The goal of the research reported here is to contribute to investigations of the prevalence, extent and recurrence of quantifiable patterns of discrimination found in language instruction books.

In the two dictionary-type books analyzed here, gender differentiation is observable in the usage of personal pronouns, and is documented according to criteria established by Lupardus in previous publications and presentations. Pronouns provide the basis for measurement of the balance of gender distribution and are convenient for that purpose because pronouns can be lexically marked for gender (as in third-person singular pronouns in English), and because personal pronouns in English are morphologically marked for case, whereas nouns and noun phrases are not. For these reasons, tabulation of personal pronouns provides easier access to both quantitative and qualitative analysis of the presence of males and females. Quantitative analysis is simplified because the determination of the feature of gender (masculine/feminine) is morphological, whereas determination of the gender of most nouns is judgmental and culturally affected, though some categories of nouns, such as gendered common nouns and kinship terms, lend themselves more readily to gender-assignment. Of great importance however, is the widespread distribution of personal pronouns and the fact that it is also possible to categorize the pronouns according to case: nominative and the oblique cases (accusative, genitive, and dative). Categorization by case provides simplified qualitative analysis which can be quantitatively assessed. Moreover, because pronouns do not carry the full range of semantic features associated with nouns, especially proper nouns, it can be assumed that the more general and seemingly "less important" or "less specific" status of pronouns may result in their being more representative of undercurrents of bias.

## SOURCES OF DATA AND METHOD OF DATA COLLECTION

The data and analysis presented here was part of a more extensive examination of seven books used for used for teaching Japanese to speakers of English, five of the books being instructional textbooks of elementary to lower intermediate level, and two being supplementary "word-books" usable as dictionaries. Analysis of those word-books is the focus of the research presented here.

Among language-instructional sources, dictionary-type books differ significantly from textbooks. Most importantly, word-books (dictionaries and such) are collections
of small, self-contained units that are sequentially ordered arbitrarily (alphabetically, or by kana or kanji). This is quite in contrast to textbook-type language-instructional sources which typically aim at a graduated presentation of material, from simple to more complex. Moreover, language- instructional sources are substantially more context-dependent and interrelated than dictionary- type sources.

The arbitrary, context-free nature of dictionary-type data lends itself more readily to statistical analysis of the distribution of gender because context-dependent data involves a larger amount of interrelated variables. For instance, there is the problem of determining whether the recurrence of a particular noun or a pronoun might have the same referent. In the word-books, such a question is limited in scope to adjacent sentences or phrases, but in a language-instruction book, the problem of determination may concern several sentences, paragraphs, pages, or chapters of the book.

The two "word-books" selected for this research contain phrasal and sentential examples of both Japanese and English, yet both books were ordered and arranged according to Japanese-language entries. The two books selected were the following, the first one being a sequenced presentation of five hundred basic kanji, the second being a general dictionary.
1978. The Japan Foundation. Nihongo: First Lessons in Kanji.
1983. Kenkyusha's New Collegiate Japanese-English Dictionary (third edition) For purposes of abbreviation, the above two books are generally referred to here as Nihongo and Dictionary, respectively.

## PRONOUNS AS THE TARGET OF STUDY OF GENDER

The target of the study reported here was gender-bearing personal pronouns, yet the research was part of a larger investigation and tabulation of a variety of specific visual or linguistic forms (illustrations, proper nouns, common nouns, and kinship terms); it is those supplemental forms which might affect both the selection and the gender interpretation of the pronouns. For example, there is a problem inherent in the "generic" usage of the third-person masculine pronoun, eg.,"Someone left his carlights on," vs. gender-specific usage, "One of the bulls broke his leg". In this study, usually no attempt was made here to identify generic usage, so generic usage is subsumed under masculine forms. The reason for avoiding confrontation with this problem is that the effort needed to address this matter is considerable; moreover, in many instances, lack of context makes it impossible to determine whether a particular occurrence of he, his, him is generic or not.

As with English, Japanese has gendered third-person personal pronouns: kare and kanojo. But in contrast to English grammar, the grammar of Japanese is less rigid in requiring overt nominal or pronominal expression. Therefore, in translating

Japanese to English，it is often necessary to insert into the English expression pronouns which are not present in the Japanese source．This contrastive feature of the two languages was exploited for the purpose of this research．

Because gender distinction is nearly obligatory in third－person－singular references in English，and can be avoided only by use of cumbersome expressions such as（some）one or（some）one＇s and（s）he，his／her，etc．，it was convenient to use English pronominal expressions as the basis for tabulating the occurrence of gender distinctions in the sources under study here．Moreover，to some extent tabulation according to English enables greater extent of comparison of other grammatical features：English pronouns，unlike Japanese pronouns，inflect for case．For such reasons，the two word－books investigated were analyzed according to occurrence of gender－bearing pronouns of English，as compared to their Japanese translations， though the translation itself was actually from Japanese to English．

## PROCEDURE FOR ACQUISITION OF DATA

In the full collection of seven books，each book was subjected to page－by page analysis except in the case of Kenkyusha＇s Japanese－English dictionary．For the dictionary，approximately five percent of the pages of the book were investigated for the tabulation of gendered forms．For the Dictionary，analysis was restricted to the initial page of each kana entry（あいうえお，かきくけこ．．．）．Analysis included copying of each gendered form within the sentential／phrasal context of its appearance．The forms themselves were then categorized and tabulated．The distribution of forms is given in terms of occurrence within three categorized areas：inventory，incidences， and entries．

## INVENTORY，INCIDENCES，and ENTRIES

The observed gender－bearing pronouns were tabulated according to type and location，with numbers reported in terms of inventory and incidence．The distinction is best explained by a simple example：the English alphabet has an inventory of twenty－ six letters，six incidences of vowels，and twenty－one incidences of consonants（one letter，$y$ ，is＂mixed＂in that it functions as both a consonant and a vowel）．In the word alphabet，there is an inventory of seven distinct letters，six of which have an incidence of one，and one of which（the letter a）has an incidence of two．Thus within any given domain，the total number of incidences is necessarily equal to or greater than the number of the inventory，and cannot be less．

Inventory is the fixed set of specific enumerable entities（pronouns，names，kin terms，etc．）．

Incidences is the number of occurrences（in a specified domain，such as a page or a chapter）of the entities enumerated in the inventory．

For example, if a book contains six and only six different kin terms, no chapter can have an inventory of more than six kin terms, though the chapters can have great variability in their selection (inventory) of those six kin terms and in the number (the incidences) of the selected kin terms.

It is valuable in research such as this, which tabulates forms based on a binary distinction (male/female), to distinguish between inventory and incidences because the tabulation that incorporates that distinction enables greater clarification of the differences in proportionate distribution. On the other hand, for dictionary-type books, it is useful to introduce yet another category, entry. Although not the equivalent of inventory, the category entry is also a limiting set such that the number of incidences is necessarily equal to or greater than the number of entries. Again, rather than defining the term, it is best to give an example, this time from the data. In this example, italics is used both to indicate the Japanese form (which is additionally presented in bold) and to indicate a gendered form used in the English translation.

In the book Nihongo, kanji \#490 (p.448) is 産 defined as "to give birth; to produce" and provided with three usage-divisions (grammatical forms, or "readings"), for which examples are given:

1. umu (two example sentences in Japanese),
2. umareru (one example sentence in Japanese),
3. san (eight example sentences or phrases in Japanese).

The second example for umu had one English translation ("Mr. Obayahsi's wife gave birth to a girl this morning"). That English sentence would be tallied for three inventoried gendered nouns: the masculine proper noun phrase Mr. Obayashi, and the two feminine common nouns wife and girl, which would be appropriately subcategorized, the former as a kin term. and the latter as immature. The example for umareru had two English translations ("She gave birth to a boy" and "A boy was born to her;" italics added here). The second example for san also had two English translations ("She will give birth next month" and "Her baby will be born next month;" again with italics added here). Those were the only examples of gendered English (pro) nouns on that page of Nihongo. For the purposes of this research, therefore, that page contained three entries with gender (three Japanese phrases/ sentences that were translated into English such that the nouns or pronouns in English were gendered. There were two double-entries (one Japanese expression with two alternative translations). As for inventory, for those entries there were no masculine pronouns, but there was an inventory of two feminine pronouns (she, and her); there were also two feminine nouns (wife and girl), and two masculine nouns/noun-phrases (Mr. Obayashi and boy). As for incidences of those six inventoried gendered expressions, three occurred once (Mr. Obayashi, wife, girl) and
three occurred twice (she, her and boy). In summary, for Nihongo's kanji \#490, there were three gendered entries (only two of which had gendered pronouns in English), including two double-entries (i.e. two translations for one Japanese sentence/phrase).

To rephrase the function of these category terms entry, inventory, and incidence, the terms inventory and incidence refer to the tabulation of the linguistic forms themselves (inventory indicates the number of types of the linguistic forms and incidences indicates the number of occurrences of those inventoried linguistic forms.) The category entry, however, is essentially a territorial domain (like sentence, or chapter, or book) within which inventories and incidences may be tabulated. Because of the different nature of dictionary-type books and language- instruction books, tabulation of the distribution of gendered pronouns reveals that the dictionarycategory entry has a statistical resemblance to the textbook-category inventory.

## GRAMMATICAL CATEGORIES MORPHOLOGICALLY MARKED

In processing the data, pronouns are additionally subcategorized according to their grammatical function. In general, the expression nominative is used here to refer to the subject form (such as he and she), the expression genitive refers to the possessive form (such as his and her), the expression accusative refers to the object form (such as him and her), and reflexive refers to terms such as himself and herself. For the most part, finer grammatical distinctions are not needed for the level of analysis presented here. Note that in English, "dative" pronouns (indirect-object forms), are not morphologically distinct from accusative pronouns; therefore "accusative" as used here indicates both direct and indirect object forms. However, special effort was made to distinguish the accusative and genitive instances of her in order to enable comparison with him and his.

Incidentally, the study of which this is a part was the first attempt to apply Lupardus's tabulatory techniques to lexical reference books. It was then found that the operative distinction inventory/incidences was inadequate for such books, and therefore the category entries was introduced. The difficulty of comparing the two differently-structured books (Nihongo and the DIctionary) necessitated constant reassessment and redefinition of the category entry, and by extension the other two categories

## SPECIFICS FEATURES OF ANALYSIS OF THE TWO WORD-BOOKS

## A. Nihongo (a kanji-instruction book)

The first source to be considered here is Nihongo, the book by the Japan Foundation. That book is similar to a dictionary in that it lists linguistic forms (i.e. kanji) which are accompanied by Japanese examples of usage and English
translations in the form of words, phrases, and sentences.
Only entries whose translation contained an English gendered noun or pronoun were tabulated. More specifically, for this report, focus is on the tabulation of entries that contained English third-person singular (gendered) pronouns. (In total, the book contained several thousand entries, but about 450 gendered entries.)

The tally of pronominal forms is here classified, however, according to the lexicalentry category of the Japanese expression. For example, an entry with a Japanese expression containing a gender-bearing form, such as otoko "male/man" or onna "female/woman," accompanied by an English translation using he, his, she, her, etc., is an example of a gendered-set entry, whereas a Japanese phrase or sentence which contains no gendered nominal or pronominal, yet which is nonetheless translated into English equivalent that includes a third-person gendered personal pronoun, is tallied as an empty set entry because the Japanese form itself was "empty" of gender, which was instead introduced in the English translation. Similarly, "non-gendered (pro) nominal forms" (such as ano hito "that person") are empty of gender in the Japanese source, gender being introduced in the English translation. (The reason they are labeled "(pro) nominal" is because forms which are grammatically noun phrases may function paraphrastically as pronouns.) On the other hand, though the Japanese form may appear to be genderless morphologically, the English attribution of gender may reflect either inherent gender of the Japanese form or the psychological/cultural awareness of the speaker. For example, the Japanese expression translated as "king" is distinct from an equivalent form for "queen" because of the absence of gender marking (as with the unmarked English form "actor" versus the marked form "actress"); it is therefore categorized here as if the Japanese source had been the genderless equivalent of "ruler" rather than "king". No instances were noted of gender appearing in Japanese but not in the English translation except for four entries of the first-person masculine pronoun boku which was translated simply as "I" or "my," depending on the grammatical context.

This investigation reported here, therefore, looks at "gender" through translation, though the gender tallied may be inherent in the original Japanese expression (gendered-set entries) or it may have been introduced through the translation (emptyset entries). Primary focus, however, is on entries for which gender appears in the English pronoun.

## B. Kenkyusha's Japanese-English Dictionary

Procedures and results for the tabulation of pronominal forms in Kenkyusha's Dictionary are somewhat different from what has been presented here for the tabulation of forms in Nihongo. The most important difference is that the data presented here for the Dictionary is incomplete, being rather something like an
estimate of the expected proportions of the pronouns in the book．The dictionary contains 1348 pages of dictionary－entries，including page－bottom notes，together holding thousands of entries and translations．Whereas in the case of Nihongo，it was comparatively simple to tabulate entries and incidences for the entire book（though verification of numbers and forms of the data was tedious and frustrating），an equivalent procedure for the Dictionary would be prohibitive．Instead，the procedure undertaken here could be applied to a similar study of any other dictionary：the complete page of the first－entry page of every Japanese kana－headed section was examined for presence of gendered nominals and pronominals，again using English gendered forms as the basis of inclusion of entries．All entries on that page were included，whether the entries belonged to the targeted kana－headed section or to the preceding section．（All such pages containing a kana－headed sections were formatted with essentially the same number of lines，regardless of whether the kana－heading was high or low on the page．）Entries in the page－bottom notes were also included， with allowance made for inclusion of words on the preceding or following page provided that the words were part of an entry of the target page．However，because of the extensive variety of entry types in the Dictionary，no attempt was made to distinguish between single and double entries，as had been done with Nihongo．（This is further excusable because，as it turned out，there was no significant difference in the percentage of incidences of double entries for males and females in Nihongo．）

Since tabulation was undertaken for forty－five＂full＂pages，regardless of how high or low on the page the target－syllable section began，and since tabulation included whatever material properly belonged to that page（including entries，if present，from the preceding kana－headed section as well as additional words or phrases from the preceding and／or the following page），it is assumed that the collection provides a fair estimate of the proportionate distribution of gendered forms in the Dictionary．Tabulation，of course，was limited to gendered nouns and pronouns，as discussed and defined already in the previous subsection dealing with Nihongo．However，no attempt was made to estimate the number of entries for the book as a whole，merely to consider the proportions occurring in the data thus obtained．

As with Nihongo，tabulated＂gender－bearing English pronominal＂entries for the Dictionary were distinguished according to whether the Japanese source－entry for the English translation contained gendered forms that served as the source for one or more of the English gendered pronouns appearing in the translation．For the most part，three＂types＂of Japanese＂source－entry＂can be identified：（1）gendered pronominals（specifically 彼 kare＂he／his／him＂or 彼女 kanojo＂she／her／her（acc．）＂），（2） gendered nominals（specifically 男 or 女 or composite expressions using those kanji，or other kanji with clearly marked gender distinctions that were manifested in
the English translation), and (3) genderless "empty-set" ("ES") expressions (as defined earlier. Generally, however, figures for gendered-set entries (for both gendered pronouns and gendered nouns) have been combined for presentation here.

On the other hand, quite in contrast to what was found in Nihongo, there was cooccurrence of the Japanese first-person pronoun boku with other gendered forms, but again, of course, in the English translation there was no gender associated with the first-person pronoun. Tabulation of the hundreds of entries found on forty-five pages of the Dictionary provide the relevant data and revealed nearly 150 entries with genderless first-person references and about two dozen occurrences of boku, a third of which occurred with gendered pronouns or nouns. Nevertheless, for purposes of comparison, attention is drawn here mostly to occurrences of gendered pronouns as identified by tabulation of gender appearing in the English translation (that is, thirdperson singular pronouns). Additionally, is it to be noticed that gender distinctions occurred more often in the English translation than in the Japanese-language source.

## RESULTS OF THE STUDY: Quantitative analysis of the research data

This section is for presenting in tabular form specific results of the study of gender in the two word-books. Some notations and comments are included here, but limitations of space restrict interpretive analysis to a minimum. Discussion with reference to specific examples is, for the most part, postponed to a later publication.

There were difficulties in comparing the pronoun tabulations for Nihongo and the Dictionary because of the problem co-occurrence of pronouns and mixed-gender entries. As indicated earlier, Nihongo contains about 450 gendered entries, of which nearly forty percent contain gendered pronouns. However, that book contains no entry which has both masculine and feminine pronouns, neither in Japanese nor in English, though it has a very few entry-sentences containing a noun with gender opposite that of the gendered pronoun(s) in the sentence. (The examples of mixedgender entries given earlier in the discussion of the terms inventory, incidences, and entries are from Nihongo.) By contrast, the forty-five pages of the Dictionary which were tabulated for this research provided nearly as many gendered entries, and coincidentally provided the same total number of gendered pronoun entries (172), but they also contained a significant number of entries that had nouns or pronouns of opposite gender.

Whereas for Nihongo, the male-only gendered-pronoun entries could be tabulated as a subset of male-pronoun entries, and the female-only as a subset of female-pronoun entries, for the Dictionary this procedure introduced confusion because the sets of female-pronoun entries and male-pronoun entries overlapped (i.e., they shared three gendered-set entries).

For purposes of reference, and to acquaint the reader with the specific instances,
those three mixed-gender entries (having gendered pronouns of both sets) found in the Dictionary are the following (page number given in parentheses). In the English translation of these three gendered-set entries (kare and kanojo were the corresponding source-pronouns used in Japanese), gendered pronouns are set here in italics, feminine forms are additionally in bold, and masculine forms are underlined, including the proper noun.

In her confusion she could hardly make out what he was trying to say.(p.458)
He palmed it off on her as a real Cezanne.(p.1153)
His kind words melted her heart.(p.1265)
As can be seen, there are seven pronouns here, three masculine and four feminine (57 percent female). On the other hand, two thirds of the male pronouns are nominative while three-fourths of the female pronouns are in oblique cases (i.e., not nominative). The significance of grammatical case is a matter worth discussing but here attention will be drawn only to numerical differences of occurrence.

In the following tables, the expression "pronoun" refers to gendered third-person personal pronouns. Entries containing other gendered pronouns (such as boku, masculine " I ") are not tabulated here unless the entry contains a gendered thirdperson pronoun.

Tables 1~3 present tabulations of entries and incidences for Nihongo and the Dictionary. What is noteworthy in Table 1, beside the coincidental occurrence of exactly 172 gendered pronoun-bearing entries in both the dictionary-type books, is that the percentage of entries having female pronouns is much smaller than the percentage having male pronouns, and that the Dictionary has between ten to fifteen percent females while Nihongo is only slightly more generous with fifteen to twenty percent females.

Table 2 shows that the percentage of females among incidences is also low, ranging from scarcely twelve percent to less than sixteen percent. More particularly, in Nihongo the percentage of females among incidences is lower than among entries, while for Dictionary the percentage appears to be essentially the same for both entries and incidences.

Table 3 provides a very important distinction, however, and that is the relationship between the English pronoun translations and the appearance, or nonappearance, of gendered forms in the original Japanese source. As can be seen from the figures in that table, for both entries and incidences of the masculine English pronoun, about one in five are tallied as male because masculinity was introduced in the translation from Japanese to English. On the other hand, only about one in eight or nine of the feminine English pronouns (entries and incidences) was introduced because of translation. The difference in treatment in the Dictionary is even greater: one in four of the entries having male pronouns in English received masculinity in
the translation, while only one in seven female-pronoun entries had the feature 'female' introduced through translation. The difference in incidences is similar: almost one in three male pronouns in the Dictionary occur in association with genderless Japanese expressions, but only one in five female pronouns are associated with genderless expressions in Japanese. This same information is presented in a different manner in Table 5, which shows that a larger percentage of females' entries and incidences are associated with gender-bearing Japanese expressions than is the case with males' entries and incidences.

TABLE 1. ENTRIES

|  | Nihongo | Dictionary |
| :---: | :---: | :---: |
| Total entries | 172 | 172 |
| Male-pronoun entries | 142 (137 male-only) | 152 (all without female pronouns) (3 with female noun wife) (149 male-only) |
| Female-pronoun entries | 30 (28 female-only) | 20 (*incl. 3 with male pronouns; and 3 with male nouns) (14 female-only) |
| Percent female | 17.4\% (30/172x100) | 11.6\% (20/172x100) |

NOTE: For Nihongo, five male-pronoun entries have a non-pronominal reference to a female, and two female-pronoun entries have a non-pronominal reference to a male; no entries contained pronouns of both genders. For Dictionary, six of the 155 male-pronoun entries contained reference to a female: three contained a female pronoun (and are tallied under "female-pronoun entries"), and three contained a feminine noun (in all three instances, the noun was wife). Of twenty Dictionary entries containing female pronouns, six contain Japanese-language reference to a male: three contain a male pronoun (one of those three also contains a masculine proper noun, the surname of a famous artist), one contains a masculine proper noun (this time a given name), and two contain the Japanese pronoun boku. The figure 172 for total entries for both books is coincidental and not a typographical error. But see the note for Table 3.

TABLE 2. INCIDENCES

|  | Nihongo | Dictionary |
| :--- | :--- | :--- |
| Total incidences | 225 | 251 |
| Male-pronoun incidences | 190 | 221 |
| Female-pronoun incidences | 35 | 30 |
| Percent female | $15.6 \%$ | $12.0 \%$ |

TABLE 3. GENDERED-SET (GenS) AND EMPTY-SET (ES) ENTRIES \& INCIDENCES

|  | Nihongo | Dictionary |
| :--- | :---: | :---: |
| ENTRIES: Total (GenS + ES) | $172(140+32)$ | $172(131+41)$ |
| Male-pronoun entries | $142(114+28)$ | $155(117+38) *$ |
| Female-pronoun entries | $30(26+4)$ | $20(17+3)$ |
| Percent Empty-Set (ES), male | $19.7 \%$ | $24.5 \%$ |
| female | $13.3 \%$ | $15.0 \%$ |
| INCIDENCES: Total (GenS + ES) |  |  |
| Male-pronoun incidences | $190(153+37)$ | $221(155+66)$ |
| Female-pronoun incidences | $35(31+4)$ | $30(24+6)$ |
| Percent Empty-Set (ES), male | $19.5 \%$ | $29.9 \%$ |
| female | $11.4 \%$ | $20.0 \%$ |

Note: In order to calculate the percentage of female-pronoun entries, the number of malepronoun entries was given as 152 (not 155) in Table 1 in order to avoid double tabulation of the three mixed-gender entries. Here the three mixed-gender entries are included in the tabulations shown for both males and females, resulting in the entry number 155 for males. Note also that the number of entries is based on the number of Japanese-language entries with gendered forms (and corresponding occurrence of English gendered pronouns), whereas the number of incidences is based solely on the tabulation of occurrences of English gendered pronominal forms, many of which are necessitated because of syntactic requirements in English. Percent empty-set here is computed as in the following example: in the Dictionary figure (for female entries) $15 \%$ equals 3 divided by $20(=17+3)$ converted to percent.

## Quantitative analysis of qualitative differences: assignment of case

The preceding tables presented a quantitative comparison of the presence of male and female pronominal forms in the two word-books under investigation. The next four tables include additional features in the classification of the pronouns. First to be considered is whether gender was overtly specified in the Japanese original expression (gendered-set pronouns) or whether the original Japanese expression was empty of gender (empty-set pronouns). Second to be considered is separation of pronouns according to grammatical case.

Investigation of presence or absence of gender in the Japanese source shows that masculine pronouns tend to dominate the unmotivated gender-assignment in translation. Comparison of distributions according to grammatical case also exposes the qualitative "strength" of the masculine pronouns. That is, to a certain extent, the existence of case functions similarly to the presence of hierarchical levels of
promotion．As is seen in the following tables，the nominative case can be compared to management in terms of perceived value，whereas the accusative case has less perceived value and can be associated with non－management．This analogy does not hold in terms of absolute numbers but rather as categories within which the representation of the higher－valued class（males）and the lower－valued class（females） are set in contrast．

Tables 4～6 give particular consideration to the comparison of incidences， classified as gendered－set（associated with gender in the Japanese source）or empty－ set（with gender introduced in translation）．The distinction is further analyzed by separately tabulating the pronouns according to grammatical case（in Tables 4 and 6），a significance which will be discussed later．The figures tabulated in Table 4 provide the basis for the presentation of percentages given in Tables 5 and 6．Most noteworthy in Table 6 is that female pronouns amount to over 40 percent of the accusative pronouns in Nihongo，while in the Dictionary，the highest percentage of females occurs in the genitive case．For both books，the lowest percentage of females among total incidences（other than zero percent）is found among nominative pronouns．

TABLE 4．INCIDENCES BY GRAMMATICAL CASE \＆SET（GenS \＆ES）

|  |  | Nihongo | Dictionary |
| :---: | :---: | :---: | :---: |
| Male TOTAL（Gens |  | $190(153+37)$ | 221 （155＋66） |
| 〈Empty－set as perc |  | ＜19．5\％＞ | 〈29．9\％＞ |
| Grammatical case | NOM． | $132(110+22)$ | $130(99+31)$ |
|  | GEN． | $47(33+14)$ | $67(44+23)$ |
|  | ACC． | $7(7+0)$ | $21(12+9)$ |
|  | REFL． | $4(3+1)$ | $3(0+3)$ |
| ＜Nominative as per |  | ＜69．5\％＞ | 〈58．8\％＞ |
| Female TOTAL（G |  | $35(31+4)$ | $30(24+6)$ |
| 〈Empty－set as perc |  | ＜11．4\％＞ | 〈20．0\％＞ |
| Grammatical case | NOM． | $22(19+3)$ | $15(12+3)$ |
|  | GEN． | $8(7+1)$ | $12(9+3)$ |
|  | ACC． | $5(5+0)$ | $3(3+0)$ |
|  | REFL． | 0 | 0 |
| ＜Nominative as per |  | 〈62．9\％＞ | 〈50．0\％＞ |

Note：In both books，the gender of the pronouns is determined primarily by gender in the Japanese source expression；however，masculine gender is much more likely to be assigned than feminine gender if the Japanese source is without gender．

Note: In both books, and for both males and females, there are more instances of nominative pronouns than genitive, and accusative is significantly less, while the appearance of reflexive is minimal.

## TABLE 5. PERCENT SHARE (WITHIN SEX) OF GENDERED-SET AND EMPTY-SET

|  | Nihongo |  |
| :--- | :--- | :--- |
| Percent Share (within sex) | Males, Females | Dictionary |
| Gender-Specific | $80 \%<89 \%$ | $70 \%<80 \%$ |
| Empty-Set | $20 \%>11 \%$ | $30 \%>20 \%$ |

Note: Figures are for incidences, and are derived from Table 4. Angle brackets indicate "more than" $(>)$ and "less than" $(<)$. Note that the appearance of female pronominal forms in the English translation is heavily dependent on the overt presence of gender in the original Japanese expression.

In Table 6, it is possible to see that female pronouns account for twelve to fifteen percent of all pronouns (masculine and feminine) except for accusative-case pronouns in Nihongo. Notice that Table 6 does not provide percent share, though the dominance of accusative in the distribution for Nihongo almost makes it appear otherwise.

TABLE 6. PERCENT FEMALE AMONG INCIDENCES (BY SET \& GRAMMATICAL CASE)

|  |  | Nihongo |  | Dictionary |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| TOTAL (GenS, ES) |  | 15.5\% | (16.8, 9.8) | 12.0\% | (13.4, 8.3) |
| Grammatical case | NOM. | 14.3 | (14.7, 12.0) | 10.3 | (10.8, 8.8) |
|  | GEN. | 14.5 | (17.5, 6.7) | 15.2 | (17.0, 11.5) |
|  | ACC. | 41.7 | (41.7, 0) | 12.5 | (20.0, 0) |
|  | REFL. | 0 |  | 0 |  |

Note: These figures are derived from Table 4. The percentages of females given for gendered-set and empty-set are not additive but are derived from the figures in Table 4 which were summed to provide the corresponding total. Percentages female for the totals are given here in bold. The category reflexive is included in this table because there were male reflexive pronouns, even though there were no female reflexives. The high percentage of females among the accusative gendered pronominal forms in Nihongo is to be noted. And again it is to be noted that the female gender is less likely to be introduced in translation if it is not overt in the source.

The last table to be presented shows the occurrence of gendered pronouns in expressions that contain reference to the opposite sex. The table is constructed to show the calculation of percentages. That is, on the whole only a very small percentage of gendered pronouns appear in expressions which contain reference to the opposite sex. On the other hand, none of the twenty-eight masculine accusative pronouns appears in a context with reference to females whereas as high as forty percent of feminine accusative pronouns appear in the presence of males. In total, female pronominal forms are more likely to occur in the context of reference to males, and males pronominal forms are less likely to occur when there is reference to females, unless the masculine pronominal form is genitive-the presence of females seems to inflate the males' possessiveness.

TABLE 7. PERCENT OF INCIDENCES OCCURRING WITH OPPOSITE SEX

|  |  |  | Nihongo | Dictionary |
| :---: | :---: | :---: | :---: | :---: |
| TOTAL |  | males | 190 (7) = 3.7\% | 221 (11) = 5.0\% |
|  |  | females | 35 (3) $=8.6 \%$ | 30 (5) $=16.7 \%$ |
|  | NOM. | males | 132 (4) = 3.0\% | 130 (5) = 3.8\% |
|  |  | females | 22 (1) $=4.5 \%$ | 15 (2) $=13.3 \%$ |
|  | GEN. | males | 47 (3) $=6.4 \%$ | 67 (6) $=9.0 \%$ |
|  |  | females | 8 (0) $=0 \%$ | 12 (2) $=16.7 \%$ |
|  | ACC. | males | 7 (0) $=0 \%$ | 21 (0) $=0 \%$ |
|  |  | females | $5(2)=40 \%$ | 3 (1) $=33 \%$ |
|  | REFL. | males | $4(0)=0 \%$ | 3 (0) $=0 \%$ |
|  |  | females | 0 | 0 |

Note: The figures which are not in parentheses, and which are not expressed as percentages, are derived from Table 4. The number within parentheses indicates the number of the categorized pronouns which appear in an entry that contains a noun or pronoun of the opposite sex. The percentage figures therefore refer to the percentage of pronominal incidences (for males and females, according to grammatical case) that occur in the presence of the opposite sex. Figures to be noted are the percentages of accusative male and female pronouns that occur in entries that contain reference to the opposite sex. Also notable are the substantially higher percentages for females in the presence of males, vis-avis the males' percentages in the presence of females, in the Dictionary.

The tables presented here have shown that the two dictionary-type sources are similar in their systematic minimization of the presence of females. Although there are some specific areas in which the two books differ, their difference is overall less
pronounced than their similarity：（1）females are markedly less numerous than males，（2）males are more likely to be＂introduced＂than are females（that is，where the gender is unspecified，the interpretation is more likely to be that the person is male rather than female），（3）the likelihood of appearance of males and females differs significantly according to the grammatical case（activity）of the pronoun，and（4）the proportion of females who appear in association with males is similar to the females＇ overall proportionate representation，whereas it is quite rare for males to appear in association with females．

The conclusions given in the preceding paragraph show that a close examination of gender－bearing pronouns reveals that language reference books，such at the two word－books investigated here，exhibit features of social value that can be presumed to exist in both Japanese－speaking societies and English－speaking societies：men are dominant．Whether language－instruction books such as these merely reflect the society or actively contribute to the sustainment of inequalities is beyond the scope of this study．

## NOTE

The work reported here was begun in early 1989 as a group undertaking with Yutaka Kudaka and Mieko Nakamura，who participated in the analysis of high school English textbooks used in Okinawa．An early observation was the extensive range of occupations held by males and the extreme limitation of occupations of females （restricted to kinship roles，teaching，and service）．Also males significantly outnumbered females，and tended to be more numerous or dominant late in the texts， while females tended to be more visible toward the front．These observations were reported in a series of presentations and publications：High School English Textbook Materials（JALT National Conference，June 1992），Issues of＂Fair＂Employment （Pacific Science Association $7^{\text {th }}$ Interim Conference），A Statistical Approach to Women＇s Labor in Okinawa，Japan．（Journal of the Institute of General Industrial Research，Okinawa International University，March 1995，pp．49－86），The 60：40 Principle and the status of females in education in Japan（ibid．，June 1995，pp．139－ 148），The Persistence of Discrimination：tabulating the treatment of females in two high school English textbooks（Journal of Foreign Languages，Okinawa International University，March 2000，pp．1－58），Women＇s Work and Women＇s Image as seen in Textbooks．（in 女性研究の展望と期待，Okinawa International University Public Lecture Series 3，August 1996，pp．203－261）．External references and sources are identified therein．

