

Pictorial illustrations in dictionaries

by

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Dedication

I would like to dedicate this work to my parents, Mr. James Gangla and Mrs Rebecca Gangla who have believed in me and encouraged me throughout my schooling. Mummy and Daddy, this is for all the sacrifices you have made and for giving me an opportunity many girls only dream about.

Ero kamano kwom geno ma ungo gi lamo ma odichieng mangeny. Nyasaye ok we joge.

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Summary

Although, to a great extent, research has been done on pictorial illustrations in other text types, research into their use in dictionaries has been relatively limited. This study looks at the inclusion of pictorial illustrations in dictionaries with a special emphasis on African Language dictionaries.

Ostensive addressing is an important lexicographic tool as it aids the lexicographer in conveying all the necessary details of the lemma and thus go a long way in making the dictionary a useful resource. In African Language dictionaries in particular, this is a good technique to express several of the concepts that probably do not have an equivalent in another language or are culture-specific. This can be attributed to the fact that the use of illustrations not only saves much needed space but also aids the lexicographer in defining the lemma thus leaving little room for misinterpretation.

A survey of the African language dictionaries reveals that very few of these dictionaries do actually employ pictorial illustrations. This study argues that lexicographers need to consider this technique as an important element of dictionary compilation.

Key words: Pictorial illustration, lemma, bilingual dictionaries, monolingual dictionaries, lexicography, back matter, central text, pictorial perception, lexicographer, culture.

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Chapter 1: Introduction

1.0 Introduction

‘Of the five senses sight plays a dominant part in the cognitive and linguistic development of the human mind. The pre-eminent role of this sense has always been recognised and thus education systems are based on it. Their main medium of instruction is writing supported by all kinds of illustrations, whether schematic, diagrammatic, pictorial or whatever’ (Stein 1991: 99).

Fleming (1967: 247) defines pictorial illustrations as “those configurations of line, dot or area and any combination of these three resembling events or objects (persons, places and/or things) either as perceived or as generally conceived.” Al-Kasimi (1977) comments that the definition should be expanded to include such borderline cases as number line, geometric figures, structural chemical formulas, curves, graphs and time lines.

Stein further elaborates that visual perception is basic for understanding as seen in everyday behaviour. When people do not understand what one is saying, one tends to rephrase and accompany the words by gestures, outlining shapes, relations or distances or by drawings attempting to capture those aspects of the verbal message that seem to us to block understanding. Stein further points out that the need or urge to resort to drawings or schematic representations is strongest when we want to make complex abstract phenomena or facts come over to our listeners (Stein 1991: 99). She adds that in the course of time encyclopaedias and dictionaries, which try to accumulate and describe the factual and linguistic knowledge of a society, have been compiled. One of the most fascinating aspects of dictionaries that have long suffered from a curious oversight in lexicographic research has been moved into focus: illustrations and their relation to the definitions in a dictionary. She further adds that a pictorial illustration in a dictionary should also be expanded to include the verbal modifier, which goes with it. The verbal

modifiers usually consist of (a) non sentences (i.e. title, labels and legends) and /or (b) sentences (usually adjacent captions) thus:

A pictorial illustration = a picture + verbal modifiers

1.1 Historical background to the use of pictorial illustrations in dictionaries

According to Stein (1991:101) pictorial illustrations in lexicographical work seem to have started in the Middle Ages. The lexicographical history of languages focussed upon by Hupka - French, Spanish, Italian, English and German - begins with bilingual word lists. The first pictorial illustrations thus occurred in bilingual vocabularies and dictionaries. According to Stein (1991), the first printed English Dictionary to include illustrations as woodcuts in the A to Z text is Thomas Elyot's *Dictionary* of 1538, which was followed in 1552 by Richard Huloet's *Abecedarium Anglico-Latinum*. These woodcuts occur at the beginning of each new letter of the alphabet.

1.2 Motivation for the study

As Hill (1967:93-94) pointed out in his article 'The typology of writing systems' pictures have played a great role in human communication and in the evolution of the symbolic representation of language. The use of pictorial illustrations in dictionaries has not featured much in lexicographic literature. However, when one considers how difficult it is to explain some of the concepts and the power of visual aids to assist in making the concept easily understood, pictorial illustrations become an important element of the dictionary just like the lemma or definition. The pictorial illustration is a vital part of the dictionary entry. Of particular interest is the use of pictorial illustrations in general dictionaries - either monolingual or bilingual. For example, where there are semantic differences between two languages, pictorial illustrations can contribute towards bringing out the meaning. In the *Bilingual Dholuo-English Dictionary*, the lemma 'pot' has five different translations in Dholuo and the use of pictures clearly compensates for this lexical divergence in Dholuo.

dapi *n* waterpot, jar [pl: **dapige**]
dag pi pot for water

dapi

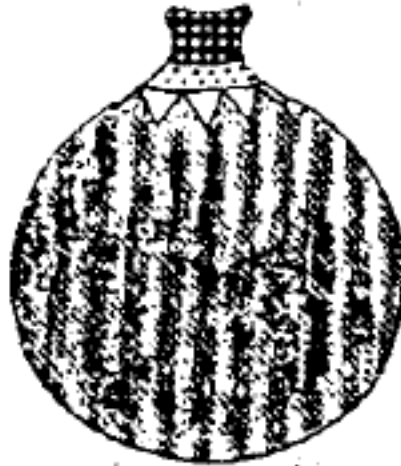


Figure 1.1 Dapi

kabangi *n* large porridge pot

kabangi

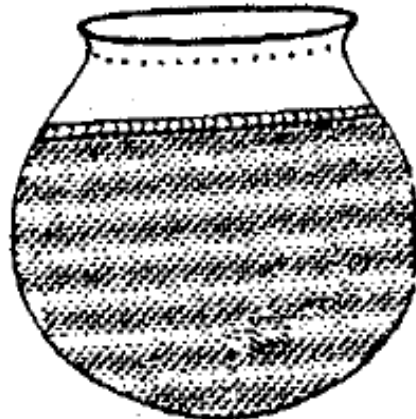


Figure 1.2 Kabangi

kasigro, kisigro, hasigro, kisiglo, osiglo
n pot (small used for fat or butter)

kasigro

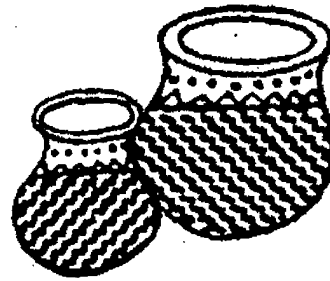


Figure 1.3 Kasigro

mbiru

pot for preparing porridge

mbiru



Figure 1.4 Mbiru

ohigia, oigla {SN} *n* pot (with two handles
used for boiling fish)

ohigla

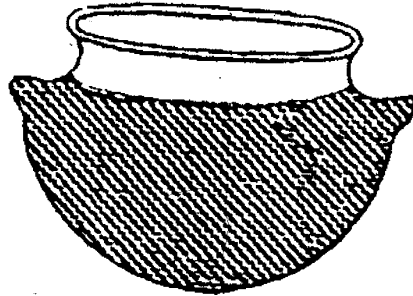


Figure 1.5 Ohigla

It will be impossible for the lexicographer to clearly indicate to the user the differences between the various pots. The pots have different shapes and decorative patterns.

1.3 Objectives of the study

1.3.1 Aims of the study

The primary aim of the study is to investigate the usefulness and value of pictorial illustrations in dictionaries.

The sub-aims of the study are to determine of pictorial illustrations in defining concepts as dictionaries are used as reference books. In addition to this the study will investigate the need for pictorial illustrations in African languages dictionaries with particular reference to the depiction of cultural elements.

1.3.2 Method

In pursuance of this task, a deductive research method will be employed, based on existing literature within the field of pictorial illustrations. An attempt will be made to provide examples for each criterion stated as necessary for a pictorial illustration. The pictorial illustrations will be drawn from various sources, as their use in dictionaries is still very limited.

Chapter 2: The functions and use of illustrations in dictionaries: a theoretical perspective

2.1 Introduction

In order to evaluate and describe the role of pictorial illustrations in dictionaries it is firstly necessary to understand their role in cognitive processing. This chapter therefore opens with a discussion of theories and models that deal with the processing and interpretation of pictures, with special emphasis on their role in the enhancement of comprehension and memory. Secondly, different scholarly perspectives to the relationships that may hold between text/prose and illustrations are discussed with a view to developing a typology that will cater for the most frequently occurring relationships in general language dictionaries. The chapter is concluded with an overview of the metalexicographic criteria that have been identified for the inclusion of illustrations in dictionaries.

2.2 Theories on the influence of pictorial illustrations on memory

Fleming & Sheikhan (1972) in their article “Influence of pictorial illustrations on memory” consider how pictures are remembered. They consider three theories, namely **Verbal storage of visual input**, **Two-stage perceptual process** and **Separate memories for different modalities**.

1. **The verbal-loop hypothesis** (Glanzer & Clark 1962) assigns a key role to covert verbalization and verbal storage of visual inputs. According to this hypothesis, a stimulus viewed (a picture or object) is translated into a series of words, which are held in memory store and used as a basis for the final response, recall, reproduction, or recognition. A basic assumption in this hypothesis is that performance on a visual perception task depends on the length of covert verbalization demanded by the task.

2. **The two-stage perceptual process** postulated by Oldfield (1966) and modified by Koen (1969) assumes an imaginable memory representation for encoding and storage of non-verbal visual elements. Oldfield states that the “familiarity domain” of a new stimulus is first responded to in non-verbal terms followed by naming and labelling operations. Koen adds that the second stage needs to occur for all stimuli. An object or a picture can be encoded, stored, retrieved and rehearsed in imaginable, non-verbal form. Verbalization, according to this view enters the process only during recall, which is conceived as a verbal decoding for the visual store rather than from the stimulus itself (Cohen & Granstrom (1970) in Fleming & Sheikhian (1972:425)).

3. The third hypothesis is based on **Gestalt theories** of memory and put forward the proposition for separate memories for different modalities (Davies 1969). According to Wallach and Averbach (1955) memories are not retained in a common intersensory store but are specific to the modalities in which they are received. With regard to this hypothesis, naming an object or a picture, when viewed, leads to laying down of both visual and verbal traces, but matching an object with its picture or viewing a picture leaves only (or primarily) a visual trace. There is, however, a very rich interconnection between the two modalities, and recall can be considered a simple function of the number of trace modalities in which an item was encoded (Davies, 1969; Bower 1969). The theoretical position permits the prediction of additive effects, i.e. that information stored dually, in both imaginal and verbal form will be better remembered than information stored in one form only.

These three theories, namely **Verbal storage of visual input**, **Two-stage perceptual process** and **Separate memories for different modalities** postulate that anything visual that is encoded is decoded into a verbal form however the visual form is not lost. The object is always retrieved in its visual form and the verbalization process simply aids in naming the concept. The difference between the three hypotheses is the point of verbalization however; they all contribute to the use of pictorial illustrations in

dictionaries as they argue that information stored dually both visually and verbally will be better remembered than information stored in only one form.

Cognitive research has shown that memory for pictures tend to be better than memory for words (Shepard 1967). Pictures can arouse the reader's interest and curiosity and are often well remembered even long after people have seen them. Fleming & Sheikhian (1972) in their article "Influence of pictorial attributes on recognition Memory" state that the question of how people attend to, process, store and recall pictorial information, long of professional interest to audiovisual people, has now become of considerable research interest to behavioural scientists. In research carried out by Shepard (1967) the subjects were allowed to take as much time as they wanted to look through a group of 612 illustrations from magazine advertisements. Their inspection time averaged six seconds per picture. Tested immediately, the subjects correctly recognized a median of 98.5 percent of the illustrations they had seen. (Fleming & Sheikhian 1972: 423).

Levi and Lentz (1982) evaluated the research literature that compared text only, illustrations only, or both text and illustrations. They found that of the 46 experimental studies they reviewed, in all but one, learning was better with text and illustrations than with text alone. In addition to this, in 81 percent of these cases the differences in favour of text and illustration combinations were significant. The largest benefits were found for people with poor reading skills, who on average performed 44 percent with text and illustrations than with text only. By contrast, more skilled readers performed 23 percent better. These results clearly indicate that the text plus illustrations combination is typically superior to text alone. The results further suggest that if the audience consists of less able readers or reluctant readers, it is especially important to combine well-designed visuals with the text and to avoid a text-only approach.

According to Daneman & Ellis (1995: 115) previous research has shown that pictures can be effective in enhancing text memory. Schultz and Woodall (1980: 148) state that pictorial mediators have also been shown to increase memory. Further to this, in a recent

review article, Pressley (1977: 582-622) cites numerous studies, which demonstrate that pictures are better remembered than words, regardless of students' ages. However, He claims that:

Although the majority of experiments examining the difference in free recall of pictures versus words indicate that pictures are better recalled than words, the performance increments produced by pictorial presentation of recall lists have been small' (Pressley 1977:601). He further states that 'There is one fact about imagery and children's learning which is indisputably true: imposed pictures are almost always learned better than words (Pressley 1977:613).

Further to this Paivio (1971) says that:

Information, which is coded into both verbal and pictorial memory systems, is more likely to be remembered than information, which is encoded into verbal memory alone. This premise, called the, Dual Coding Hypothesis, predicts that pictorial mediators should be superior to narrative mediators, because dual coding is promoted by pictorial but not narrative mediators.

In order to further investigate this Dual Coding Hypothesis, an experiment whose aim was to compare the effects of pictorial and narrative mediators in children was carried out among 126 third and fourth grade boys and girls from public schools. Underachievers and pupils with learning disabilities were not used in the experiment. Ten nouns - door, saw, fly, sing, can, light, well, drink, green and laugh- were selected at random from the Dolch Basic Word list. Two posters were printed:

- One with all words in large print for narrative mediator and control conditions.
- One with a word and an adjacent picture was used for the pictorial mediator.

According to Paivio (1971:150) recall protocols were scored for the number of correctly recalled words. The children who were given pictorial mediators recalled an average of 8.93 words while those told to construct narrative mediators recalled an average of 6.05 words and the children in the control condition recalled an average of 6.52 words. Thus,

the results of the study provide support for the Dual Coding Hypothesis: pictorial mediators were superior to all other conditions for children in the age level examined in this study.

These research findings are relevant to pictorial illustrations in dictionaries because one refers to the dictionary in order to learn something new; usually a word or the concept itself. Moreover, the results of the study, even though it was carried out amongst children, is relevant for the adult population as well since the use of pictorial illustrations aids learning in general. A concept learnt through the use of both the imaginal and the verbal form is better remembered. The explication of meaning in dictionaries could therefore be greatly enhanced by the inclusion of illustrations, especially if the dictionary has a pedagogical purpose.

2.3 Relationships between text and illustrations

According to Cianciolo (1970) both the text and illustrations in an illustrated book are important. Illustrations ought not be simply an assemblage of autonomous pictures in which the artist's only concern is to have his say. Preferably there should be a harmonious combination of written and illustrative elements in whichever book that includes illustrations. This is applicable to dictionaries too. The lemma illustrated and the illustration must be relevant and there should be some pattern in deciding which elements to illustrate and which ones not to illustrate, as the dictionary cannot be a fully illustrated text.

When words and pictures are functioning well together, there is little doubt that they give the reader better information than either one alone. In the section that follows, some suggestions will be presented that can aid document designers to choose when and how to combine copy and illustrations with better rhetorical sensitivity. However, in designing combinations of prose and graphics it is imperative to recognize that readers are independent people (Carstens 2001).

Different text genres have developed different traditions regarding the ways in which they integrate text and graphics, much of which depends on the main function (speech act) of the document and the desired effect on the user/reader.

In the following sections different traditions of integrating text and graphics will be discussed, namely:

- Document design
- The educational context
- Dictionaries (particularly special-field dictionaries)

2.3.1 Integration of text and illustrations from the perspective of Document Design

Research in document design (a field of inquiry that is concerned with the integration of text, graphics and typography for various rhetorical purposes) has characterized three key relationships among prose and pictures: redundant, complementary and supplementary (Hergarty, Carpenter & Just 1991; Willows & Houghton 1987a; 1987b). To these three Schriver (1997) adds two more: juxtapositional and stage-setting.

(a) Redundant

Redundancy is defined as the repetition or paraphrasing of key ideas. Research shows that people's understanding may be enhanced if key points are obtainable both in words and pictures, allowing readers to obtain novel information both visually and verbally, a process that Paivio (1990) calls "Dual Coding". The idea is that when pictures reformulate what is presented in prose or vice versa, the reader can generate another representation of the content.

(b) Complementary

Words and pictures that complement one another use different visual and verbal content and both modes are intended to work together in order to help the reader comprehend the same main idea.

(c) Supplementary

Words and pictures may be arranged in a supplementary relationship in which one mode is prevailing, providing the key ideas and most of the content, while the other elaborates the points made in the dominant mode.

A number of studies suggest that supplementary words and pictures may enhance learning. Bernard (1990) found that extended captions could improve learning from instructional illustrations suggesting that document designers may need to consider ways to more effectively elaborate captions to prompt readers to process the content more thoughtfully.

(d) Juxtapositional

In a juxtapositional relationship the main idea is created by a clash, an unexpected synthesis or a tension between what is represented in each mode. With juxtapositional relationships the reader cannot infer the intended idea unless both prose and graphics are present simultaneously.

(e) Stage-setting

In this relationship one mode provides a context for the mode by forecasting its content or soon-to-be presented themes. Kieras and Bovair (1984) studied how learning to operate a mechanical device can be facilitated by providing a stage-setting pictorial model that helps learners understand how the device works. They found that the users who learned procedures with the initial help of a pictorial model (they called it a “device model”) could learn new procedures with the same equipment much faster. They proposed that providing readers with a mental model of complex devices could help readers in significant ways. Their work is consistent with earlier research on mental models, advance organizers, summaries, and previews – all of which serve to help the reader to get a sense of “ the big picture” before they begin. (Adapted from Carstens 2001: Class notes)

The above relationships have been defined primarily for instructional manuals and cannot simply be extended to hold for other text types as well. Juxtapositional relationships and stage setting relationships in particular are not utilized in sources with an instructive (educational) or explanatory purpose. However, since dictionaries are documents of which the main function is to assist the user in performing important communicative tasks, it is worth-while taking cognisance of research in document design. Moreover, the relationships **redundant**, **complementary** and **supplementary** seem to be generic in that they are either implied or explicitly mentioned by lexicographers (cf. paragraph 2.2.3 below).

2.3.2 Integration of text and graphics in educational texts

2.3.2.1 Communicative potential of pictorial illustrations

Spaulding (1956: 31-46) in his article 'Communication potential of pictorial illustrations' presents some important insights into the factors that influence the communication potential of pictorial illustrations in a pedagogical context. These factors are based on a study carried out in 1951 when the Pan American Union's Latin American Fundamental Education Press in Washington D.C. in co-operation with the United Nations Educational Scientific and Cultural Organisation (UNESCO) began producing supplementary reading materials for newly literate adults in Latin America. These educational materials were to be used in agricultural and health extension work, literary programs and many other public service projects in Latin America. The major portion of the program consisted of a series of highly illustrated, simply written booklets in Spanish on subjects of immediate value and practical interest to the average rural Latin American (Spaulding 1956: 31).

In planning these booklets, the illustrations were designed to help tell the story as well as interest the intended reader. A full-page captioned illustration was used for each page of text material. These illustrations appeared throughout each booklet on the left-hand page. The text on each page was usually limited to one or two basic ideas. The facing page illustrations were planned to help the reader interpret the text (Spaulding 1956: 13).

According to Spaulding (1956: 36-37) in analysing the data the following questions were considered:

- What objects were seen and not seen by the test subjects?
- What action was described and what was not?
- What portion of the illustration seemed to attract sufficient attention to be described in detail?
- Was there any description missing?
- Was there any uniformity of response, which would indicate that the test subjects consistently examined the illustration in a particular eye-movement pattern?
- Did the illustrations using colo(u)r elicit any responses which would indicate that the colo(u)r affected interpretation either favourably or adversely?

Based on the above guidelines the interpretation data led to the proposal of the following six generalisations, which are the factors that influence the communicative potential of pictorial illustrations.

2.3.2.2 Prior knowledge and interpretation

The first generalisation is that “past experience of the viewer as would be expected largely determines how he will interpret individual objects in the illustration” (Spaulding 1956: 37). When looking at figure 2.8, which is an illustration of a man standing or walking in the Capital City, the respondents in this study did not identify it as such. They considered the illustrations to be that of a big house, either a ‘castle’ or a ‘palace’ as that is what they were familiar with and since they live in the rural areas, they have probably never seen the huge buildings found mainly in urban areas. Interestingly, some respondents thought that this was an illustration of a hospital, a concept that they had previously seen in another part of the same exercise.



Figure 2.1 A man walking in the Capital City

According to Spaulding (1956:36) of the five respondents, one person described the capital as ‘castle’, two saw it as a ‘palace’ and one saw it as a ‘hospital’. The hospital idea may be a carry-over from a previous illustration in the same test, which depicted Lincoln’s bedridden mother.

Since an American artist did the illustration, the implications may be two-fold:

- That the artist was not familiar with the experience pattern of the audience which was to view the illustration and /or
- That the subject matter at hand was so unfamiliar to most of the respondents that errors and omissions were imminent (Spaulding 1956:37-38).

Based on the above observation, the experiences of the target audience must be taken into consideration when designing any pictorial illustrations.

2.3.2.3 Prior knowledge and value judgement

The second factor according to Spaulding (1956:38) is “past experience affects the value judgements even to a greater degree than interpretation of concrete items.” In the following two figures 2.9 and 2.10 an illustration is done of the rural setting. The

respondents expressed different interpretations of this scene depending on whether they saw the caption or not.



Figure 2.2 A crowded room

Figure 2.9 is an illustration of a room. A social worker might feel that the room depicted above is crowded but most of the respondents gave very detailed descriptions of this scene. However, only one person out of nine who saw the illustration mentioned that it is a small room and this one case was probably influenced by the caption. No other person described the room in this way or mentioned that it is in any way undesirable (Spaulding 1956:38).

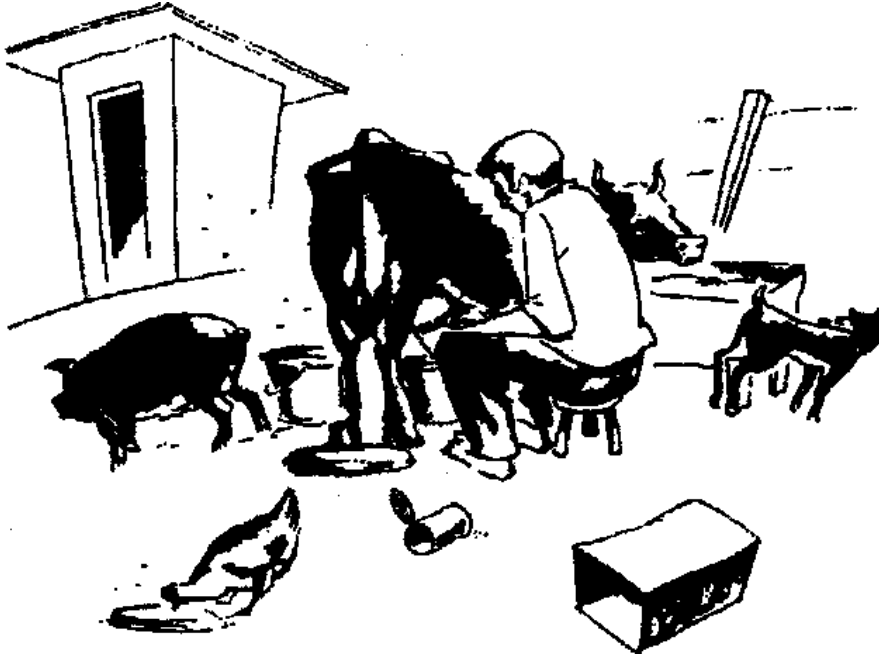


Figure 2.3 A Dirty Yard

Figure 2.10 on the other hand portrays a farmyard. The interesting bit though is that despite seeing the caption “A Dirty Yard” some of the respondents did not consider the yard dirty. Of the nine persons seeing the illustration without the caption, no one mentioned that the yard was dirty or ill kept. Of the five seeing the illustration with the caption “A Dirty Yard,” two did not mention that the farmyard looked dirty (Spaulding 1956:38).

For rural Latin America the room and the farmyard is what would be expected despite the fact that the artist attempted to portray a cramped room and a filthy farmyard, respectively. The illustration thus fails to convey the intended message. Therefore, the illustrator must be familiar with the environment of the target audience.

2.3.2.4 Generalisations

According to Spaulding (1956: 40) the third factor is that “viewers make generalisations on the basis of a limited number of specific details.”



Figure 2.4 The well

According to Spaulding (1956:40) no one viewing this illustration responded that the square enclosure is a well.



Figure 2.5 The well

According to Spaulding (1956:40) all persons tested mentioned the well, as compared with the lack of such response to figure 2.11. Therefore the importance of well-placed visual cues cannot be overemphasised as seen from the above illustrations. The addition of a rope, a bucket and a person drawing the water makes the illustration easily identifiable within the cultural practices and therefore cultural practices must be taken into account when illustrating any concept.

2.3.2.5 Interpretation of depicted actions

The fourth factor as stated by Spaulding (1956: 41) is that “people in rural areas of Latin America are extremely literal in their interpretation of depicted action.”



Figure 2.6 Cutting a tree

Of the seven viewers, three mentioned dangers in cutting tree so that it falls toward the family. Spaulding (1956:41).

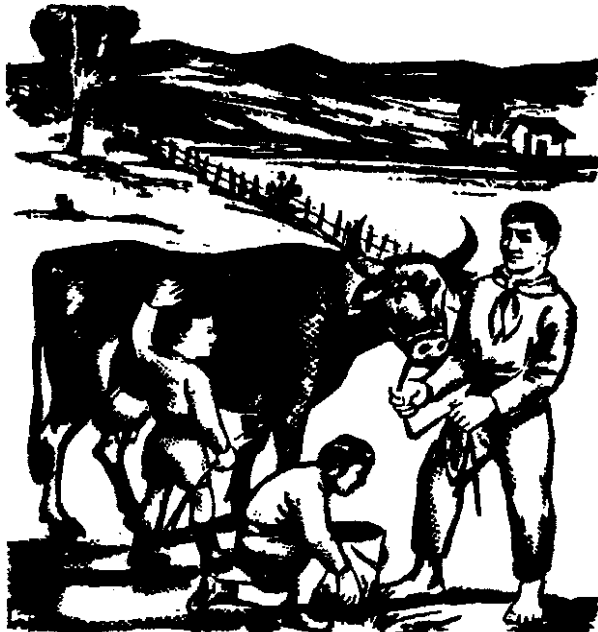


Figure 2.7 Milking a cow

According to Spaulding (1956:41) of the seven respondents, three thought that something was wrong with the leg of the cow: one thought that the boy was cutting the leg off. He further adds that these literal interpretations of the pictures show that the viewers are not able to draw meaning from the symbolism used in the illustration. It is of paramount importance to keep in mind that the target audience is the neo-literate adults of Latin America and therefore the illustrations should be easy to decipher.

2.3.2.6 Use of colour in illustrative material

According to Spaulding (1956:42) the fifth factor to consider is “the use of colo(u)r in illustrative material adds to the communication value of the illustration if the colo(u)r adds to realism; colo(u)r detracts if it is used unrealistically.”



Figure 2.8 Sweeping the yard

According to Spaulding (1956:41) this portion of the illustration elicited comments by respondents as to the odd colo(u)r of the broom and the chickens (green).



Figure 2.9 Lighting the fire

Of the four respondents, three missed the idea of fire shown in this section of the drawing. Comments indicated that the green colo(u)r of the fire caused the confusion. The use of green in figure 2.14 as the colour of the broom and the chicken is questionable. The respondents could not relate the green colour to the object portrayed, as it was odd. The use of green as the colour of fire in figure 2.15 also leads the respondents to misinterpret the illustrations, as the respondent could not relate the two concepts. Colour, when used realistically, can add to the interpretation of a diagram. However, when employed in a haphazard way it will definitely lead to misinterpretation.

2.3.2.7 Use of captions

The sixth factor according to Spaulding (1956: 43) is “captions help viewers to correctly interpret the illustration.”



HIERVE LA ROPA

Figure 2.10 Boiling the clothes

According to Spaulding (1956:43) “She boils the clothes.” The three respondents seeing the illustration with the caption mentioned the “boiling” of the clothes. Those seeing the illustration without the caption mentioned only washing with the exception of one person who saw “ plucking the feathers of a chicken.”



LA ESTRELLA DESAPARECIÓ

Figure 2.11 The star disappeared

“The star disappeared.” The majority of those viewing the illustration with the caption mentioned the reason for the frightened attitude of the Indians (Spaulding 1956: 43).

As seen above, the captions do indeed help with the interpretation of the diagram. In addition to the use of an illustration, Spaulding (1956:43-44) further proposes that the findings from the use of the captioned illustrations indicates that captions serve to:

- Describe relative conditions, which are difficult to depict pictorially for instance dirt, poverty, and health.
- Name persons, place and objects.
- Relate the action of the illustration with that which has gone on previously or that which will follow
- Specify what people in the illustration are doing (when action is vague or not familiar) thinking or saying.

- Draw attention to certain portions of the illustration.

Spaulding (1956:46) summarises by stating that in educational reading materials the text, illustrations and the captions each serve a unique function in the communication process. The text offers the continuity, while the illustration orientates and emphasises. The caption in turn clarifies the illustration so that there is no question as to the portion of text to which it refers and so that the visual cues are not misconstrued.

This study carried out by Spaulding is useful to lexicography because dictionaries are not only reference tools but also educational resources. Though dictionary users may vary from first language speakers of the language to second language speakers or foreign language speakers, the value of pictorial illustrations when employed based on the above factors cannot be disputed. Pictorial illustrations in dictionaries clearly bring out the meanings in a simplified manner as long as they meet the above criteria and thus leave little room for misinterpretation. The use of captions with illustrations cannot be overemphasised. As seen in the study by Spaulding (1956) captions aid in explaining the information that cannot be depicted visually and thus illustrations and captions work together to help a reader in the decoding of meaning.

2.3.3 Interaction between text and illustrations in dictionaries

There is not a dearth of published literature on the integration of text and illustrations in dictionaries. One of the few sources that deals with this topic, is Bergenholtz and Tarp's (1995), *Manual of Specialized lexicography*. Although this source deals primarily with technical or subject-field dictionaries, some of the guidelines provided could be applied to general language dictionaries as well. In this section the authors' views on the integration of text and graphics will be discussed.

According to Bergenholtz and Tarp (1995:159) illustrations in specialised dictionaries are used as a supplement to or substitution for encyclopaedic information. Illustrations may be placed either in connection with the individual articles or the encyclopaedic section. In addition to this illustrations may be used to serve an aesthetic function in a dictionary.

However, they state that it is not possible to lay down general guidelines as to when, how and to what extent illustrations should be included in a specialised dictionary. The decision depends on the subject field in question as well as on the nature of its Language for Specific Purposes (henceforth abbreviated as LSP) terminology. Illustrations may interact with the dictionary text in several ways:

1. The lemma *ciclo económico* in Spanish dictionary of economics is an example showing how an illustration may *stand-alone* and in itself provide all encyclopaedic information necessary to understand language for specific purposes term. The dictionary text thus merely serves to add supplementary encyclopaedic information:

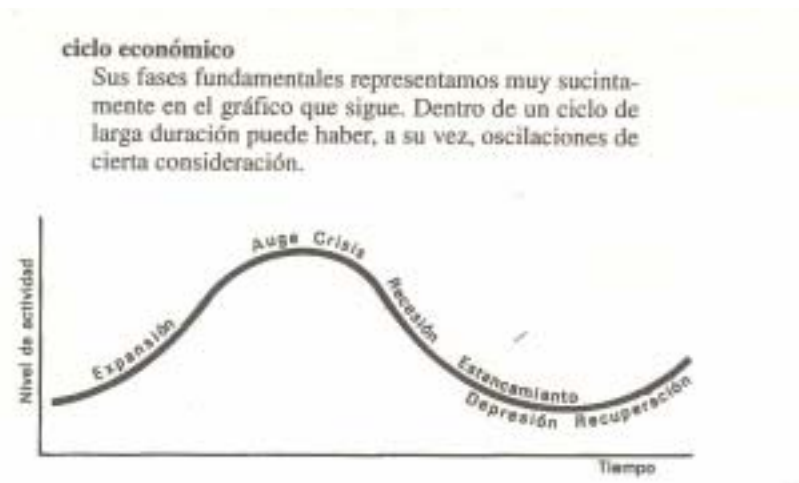
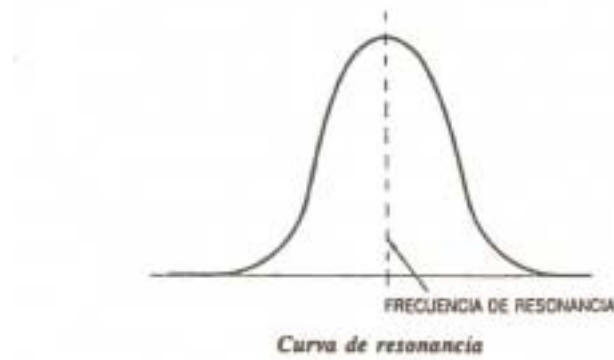


Figure 2.12 Ciclo economico

2. An example showing how an illustration may be used for the sole purpose of *elucidating* the information already provided in the text is the lemma *curva de resonancia* from a Spanish dictionary of electronic:



curva de resonancia (*resonance curve*)

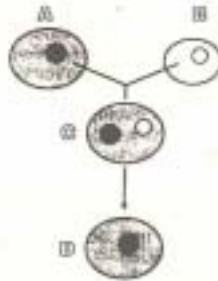
Representation gráfica de cómo un circuito sintonizado responde a la frecuencia de resonancia y a frecuencias próximas a ésta. (Resonanskurve: grafisk fremstilling af, hvordan et syntoniseret kredsløb reagerer på resonansfrekvensen og frekvenser tæt ved denne.)

Figure 2.13 Resonance curve

3. Text and illustration may also interact in such a way that the text leads up to an *explanation* of the illustration, as in the case of the lemma *cellefusion* in a dictionary of gene technology. The article first provides more general information about the lemma, after which the illustration occurs, which is then further explained.

cell fusion cell fusion

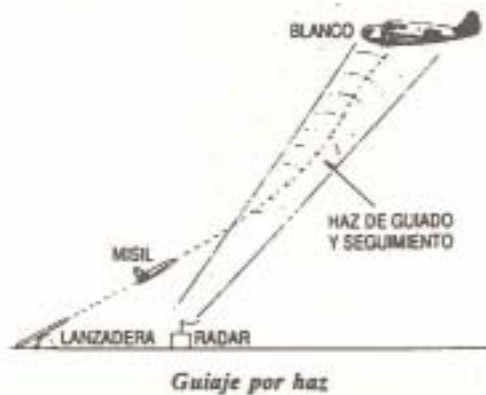
Two different types of somatic cells, i.e. cells that are not gametes, undergo cell fusion if they fuse into one cell with one nucleus containing both sets of chromosomes. The resulting cell is called a hybrid cell. The formation of hybrid cells is rare under natural conditions, but in the laboratory both hybrid plant cells and hybrid animal cells have been made. However, viable hybrid cells have only been made from cells for a limited number of species and tissues. Before plant cells can be fused, the cell walls must be removed by enzymatic treatment. Fused cells are selected among the non-fused cells by a variety of selection methods.



Cells A and B fuse and the resulting cell has two cell nuclei. In the established hybridoma cell the nuclei are melted together, forming a common nucleus.

Figure 2.14 Cell fusion

4. Taken separately, neither text nor illustration may provide the information necessary for the user to fully understand a given Language for specific purpose term. Here, only the *interplay* between text and illustration will guarantee comprehension, cf. the lemma *guiaje por haz* in a Spanish LSP dictionary.



guiaje por haz (*beam-rider guidance*) Forma de guiar misiles en la que el propio misil, debido a un mecanismo interno, se autodirige a lo largo de un haz emi-

tido por un radio. (Styringsform for missiler, hvor missilet ved hjælp af indre mekanisme selv styrer sig langs en stråle udsendt af en radar.)

Figure 2.15 Beam-rider guidance

5. There are also lemmata for which either a text or an illustration is sufficient to ensure comprehension. If both are provided nevertheless, this *overlap* has the advantage that both the more illustration-oriented and the more text-oriented user is considered., cf. the following example of overlapping text and illustration from a Danish-English dictionary of molecular biology:

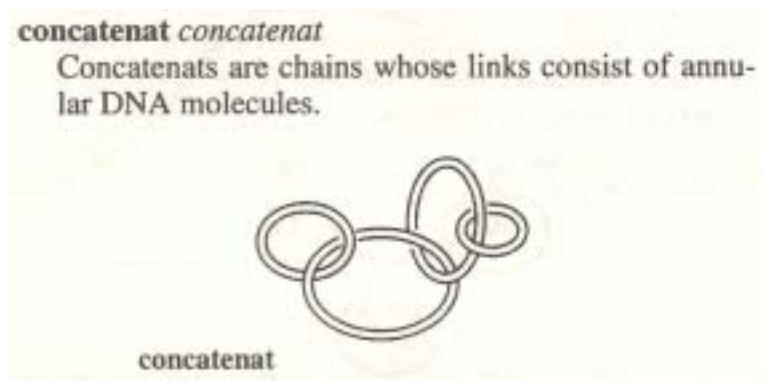


Figure 2.16 Concatenat

According to Svensen (1993:167) illustrations are concerned with the world, not with linguistic signs. In language-oriented dictionaries, their main purpose is to provide visual support for the description of the meaning content of linguistic units.

2.3.4 A typology of relationships for general language dictionaries

Based on the foregoing the following typology of relationships for general language dictionaries is proposed. This typology is based on the relationship between the text and the illustration.

- a. Self-sufficient (the illustration provides all the necessary information – perhaps supplemented by text, but the latter would be redundant)
- b. Text-supporting (the illustration elucidates one or more aspects of the text)
- c. Text-supported (the text explains the illustration)

- d. Complementary (an interplay of illustration and text is necessary to understand the meaning of the lemma)
- e. Redundant (the illustration either has a purely aesthetic purpose or completely overlaps with the text in terms of its explanatory value)

Most of the illustrations used in general language dictionaries are either text-supporting or complementary. This may be attributed to the fact that a lexicographer has very limited space and will therefore have to use pictorial illustrations only where he believes they will add value and make his lexicographic work easier. However this does not rule out the other forms of relationships such as redundant or text-supported which would then mean that the emphasis of the dictionary is on the illustration as opposed to the definition. Self-sufficient illustrations would be applicable mainly in children's picture dictionaries.

2.4 Metalexigraphic perspectives on the function and use of illustrations in dictionaries

Gouws (1994:61) argues that pictorial illustrations can be employed as a micro structural type to enhance semantic disambiguation. He further adds that pictorial illustrations have a semantic importance, a lexicographical function and a range of applications and although the primary utilization of ostensive addressing is found in the differentiation of senses in equivalent relations of semantic divergence, it is also used extensively where a lemma has a low degree of translatability. The explicitness that can be achieved through the use of pictorial illustrations enhances the retrieval of information. This applies to both monolingual descriptive and translation dictionaries.

Al-Kasimi (1977) argues that pictorial illustrations should be systematically and consistently employed in bilingual dictionaries, not for the purpose of advertisement but as an *essential lexicographic device*.

2.5 General criteria for pictorial illustrations

In Al-Kasimi's view, the lexicographer must have substantial knowledge about pictorial illustrations as necessary components of his dictionary and he considers various criteria discussed below as ideal for pictorial illustrations.

2.5.1 Compactness

It is imperative to reduce the pictorial illustration to its fundamentals. Therefore information, which is not explicitly pertinent to the concept illustrated, should be minimal and information, which distracts the dictionary user from correct interpretation or recognition of the pictorial illustration, must be strictly eliminated. Stein (1991:119) quotes the following example from the *Longman Dictionary of Contemporary English* where the lemma 'chair' is defined and a pictorial illustration depicting the different types of chairs is also provided.

Example 44: *LDOCE*

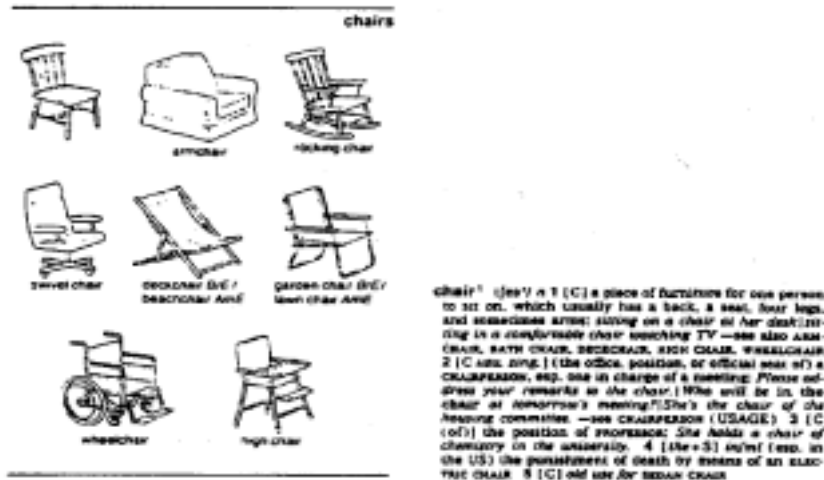


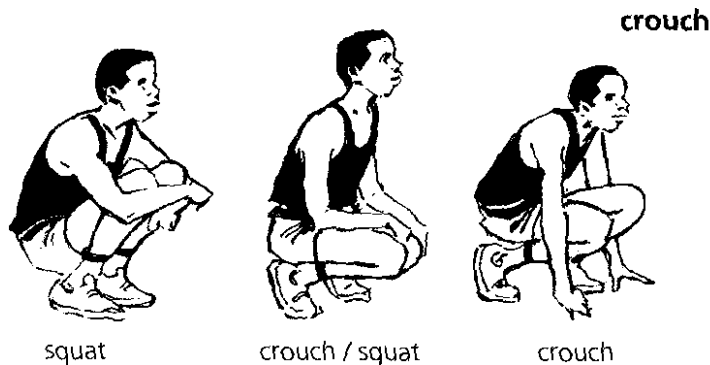
Figure 2.17 Chairs

Since the important differences are the shapes of the chairs, neither colour nor the material used is necessary for this illustration. The illustration is explicit and sufficient and saves one the daunting task of explaining the differences between the various chairs. This illustration is text-supporting as it expounds on the first meaning of the lemma

chair. The headword chair denotes a superordinate concept with not a very large number of subordinate concepts. It is therefore reasonable to deal with them all together (Svensen 1993:172).

2.5.2 Fidelity

Fidelity of pictorial illustrations is directly linked to how realistic they are. The nature of the subject matter and the level of the behavioural objective usually determine the type of pictorial illustration, that is, realistic or abstract. The higher the behavioural objective is, the more abstract the pictorial illustrations should be (Fleming 1967: 257-258). Stein (1991:121), cites the following example from *Longman Dictionary of Contemporary English* where the lemma 'crouch' is not only defined but illustrated.



crouch /kraʊtʃ/ v [I] **1** also **crouch down** to lower your body close to the ground by bending your knees completely: *My legs began to ache from crouching for so long.* | *The boy crouched down to fix his sandal.* **2** if an animal crouches it sits as low as possible, often because it is frightened or is going to attack something: *The cat crouched, its eyes following the mouse as it scurried away.*

Figure 2.18 Crouch

In a case like this where the position determines what the concept refers to when you consider the definition only 'to lower the body closer to the ground by bending the knees' in all three instances - that is, squat, crouch/squat and crouch- the body is in fact lowered

closer to the ground. However, the differences arise from the position of the back. The meaning as verbally defined here may leave leeway for various interpretations but the illustrations above removes the vagueness or ambiguity. This illustration is complementary as the interplay between the text and the illustration are essential for the comprehension of the lemma.

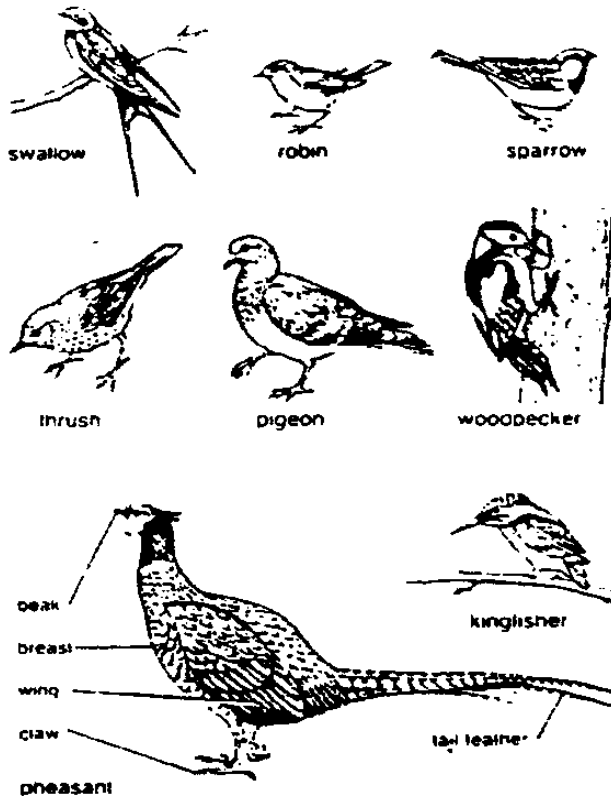
2.5.3 Interpretability

The dictionary user can understand the pictorial illustration if it has the following components:

2.5.3.1 Relevance

In view of the fact that all illustrations involve some kind of abstraction, pictures should be related to the user's past environmental and realistic experiences, which are formative factors in the user's success in the interpretation of the picture. For instance, Stein (1991:119) quotes the following from *Longman Dictionary of Contemporary English* the lemma 'bird' is defined and illustrated.

birds



bird /bɜːd/; /bɜːrd/; n 1 a creature with wings and feathers which can usu. fly in the air 2 *BrE sl* becoming *old-fash* a young woman (usu. considered offensive to women): *Who was that bird I saw you with last night?* 3 *old-fash infml* a person, esp. one who is odd or remarkable: *He's a strange old bird.* 4 a bird in the hand something you already have or are sure of getting 5 birds of a feather *infml* people of the same kind (often bad): *I'm not surprised those two are such friends; they're birds of a feather!* 6 *do bird BrE sl* to spend a period of time in prison 7 *give someone the bird infml* to make rude noises to show disapproval of someone: *The crowd gave him the bird.* 8 (strictly) for the birds *sl*, esp *AmE* worthless; silly 9 the bird has flown *infml* the person needed or wanted has gone away or escaped 10 the birds and bees *euph or humor* the facts about sex, esp. as told to children; **FACTS OF LIFE**: *He knows all about the birds and the bees.* —see also **EARLY BIRD**, **WATER BIRD**, **kill two birds with one stone** (KILL)

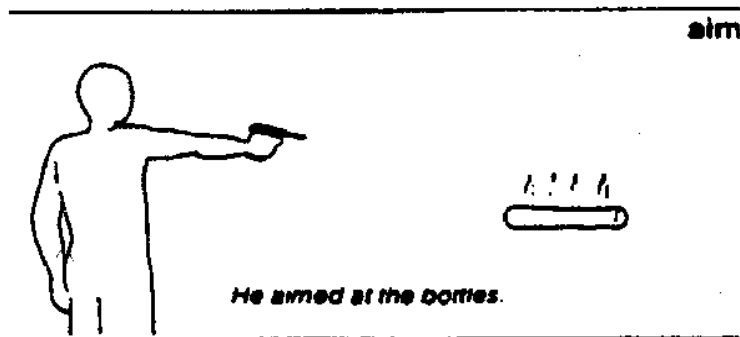
Figure 2.19 Birds

The possibility that a dictionary user has seen at least some of these birds is very high. However, the pictures will help the user in learning the different names for the different birds. This makes the dictionary a useful resource. This illustration is self-sufficient as different birds have been illustrated and their names provided in addition to this the parts of its body have been labelled.

2.5.3.2 Simplicity

Given that pictorial illustrations require a minimum of separate actions on the part of the dictionary user to understand its fundamental message, then pictorial illustrations should not be open to dual interpretation resulting from a complex pictorial illustration. Stein (1991:124) cites the following example from *Longman Dictionary of Contemporary English* where the lemma 'aim' is not only defined but also illustrated.

Example 57: *LDOCE*



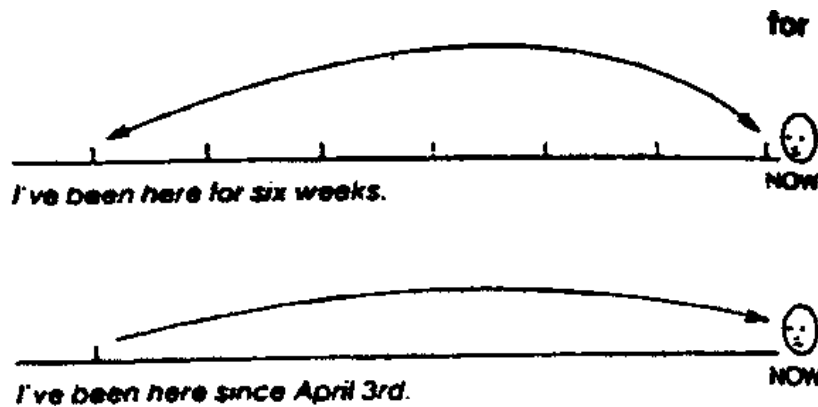
aim¹ /eɪm/ *v* 1 [I;T (at)] to point or direct (a weapon, shot, etc.) towards some object, esp. with the intention of hitting it: *I aimed at the door but hit the window.* | *He aimed the gun carefully.* | *He aimed it at the bottles.* | (fig.) *She hit back with well-aimed criticism.* | (fig.) *The programme is aimed at (=intended for) young teenagers.*
2 [I (at, for)] to direct one's efforts (towards doing or obtaining something); intend (to): *The factory must aim at increased production/aim for an increase in production.* [+ to-v] *He aims to be a successful writer.*

Figure 2.20 Aim

The illustration is for one meaning of the word 'aim' - the action. It is a simple illustration. This illustration is redundant as there is a clear overlap between the illustrations and the definition of the lemma.

2.5.3.3 Preciseness

The dictionary user's attention should be directed only to the feature of the pictorial illustration relevant to the desired concept. Stein (1991:125) cites the following example from *Longman Dictionary of Contemporary English* where the lemma 'for' is defined and illustrated.



for ¹ /fɔː/; strong fɔː/ prep 1 intended to belong to or be given to: *I've got a present for you.* | *They've bought some new chairs for the office.* | *Save some of the cake for Arthur.* —see USAGE 2 2 (shows purpose): *This knife is for cutting bread.* | *What's this handle for?* (= What is its purpose?) | *I've sent my coat away for cleaning.* (= to be cleaned) 3 instead of; so as to help: *Let me lift that heavy box for you.* 4 as a help to; in order to improve the condition of: *The doctor's given her some medicine for her cold.* 5 because of: *He was rewarded for his bravery.* | *There's a prize for finding the most mistakes.* | *We could hardly see for the thick mist.* | *He couldn't speak for laughing.* | *For several reasons, I'd rather not meet him.* —see also for fear of (FEAR¹) 6 at the time of; on the occasion of: *We've invited our guests for 9 o'clock.* | *I've got an appointment with the doctor for the 5th of March.* | *I'm warning you for the last time.* | *She's coming home for Christmas.* | *He bought his son a boat for his birthday.* 7 (shows length of time): *She didn't answer for several minutes.* | *I haven't seen her for years.* | *That's all for today.* — compare SINCE²; see USAGE 1, DURING

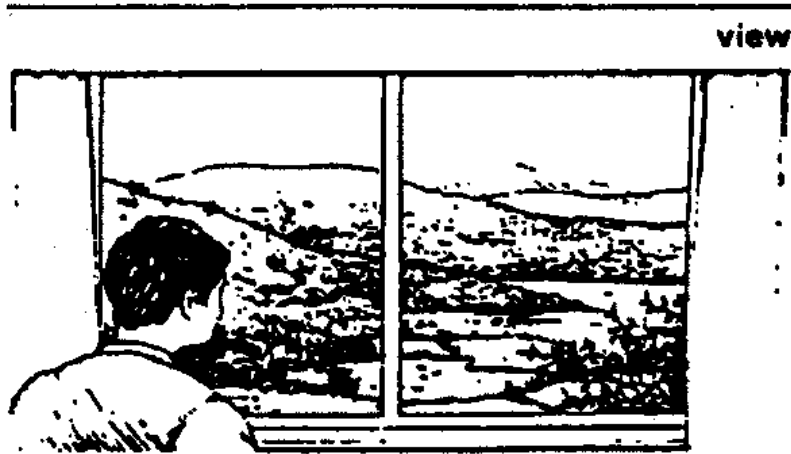
Figure 2. 21 For

The illustration is very precise and there is no room for misinterpretation. This illustration is text-supporting as it expands on the seventh meaning of the lemma **for**.

2.5.3.4 Completeness

Spaulding (1956:44) states that while the title should identify the picture, the caption should add information, which is difficult to depict. Stein (1991:124) cites the example of the lemma 'view' where the illustration has a caption from the *Longman Dictionary of Contemporary English*. The illustration depicts the nominal meaning of the word and the caption 'He had a marvellous view from his bedroom window'.

Example 56: *LDOCE*



He had a marvellous view from his bedroom window.

view¹ *vju:*: n 1 {U} ability to see or be seen from a particular place; sight: *My view of the stage was blocked by the hat of the woman sitting in front of me.* | *The car turned the corner and was lost to our view/passed out of view.* (=could not be seen any more) | *The valley was hidden from view in the mist.* | *When we reached the top of the mountain, a wide plain came into view* (=could be seen); *we came in view of* (=were able to see) *a wide plain below.* | *He fell off his horse in full view of all the television cameras.* (=seen clearly by all of them) | *There was no shelter within view.* (=that could be seen) | *The camera gave us a bird's eye view of the golf course.* (=showed it clearly from high above) 2 {C (of)} a something seen from a particular place, esp. a stretch of pleasant country; a scene: *The only view from my bedroom window is of some factory chimneys.* | *I'd like a room with a view* (=a good view), *please.* | *a marvellous/wonderful view* b a picture or photograph of scenery, a building, etc.: *a painter of sea views* —see SCENERY (USAGE) 3 {S (of)} a special chance to see or examine someone or something: *If we stand at this window, we'll get a better view (of the procession).* | (fig.) *The President will get an inside view of the problems involved when he visits a nuclear power plant tomorrow.* 4 {C

Figure 2.22 View

The illustration has a caption. This caption brings to play the meaning of the lemma and thus helps to complete the definition of the lemma therefore making the illustration complete. This illustration of the first meaning of the lemma view is self-sufficient because it clearly shows the meaning and the caption also provides additional information.

2.5.3.5 Clarity

The features of the pictorial illustration ought to be easily distinguished by the dictionary user. This requires an adequate artistic and typographical performance and an appropriate size. The illustrator must bear in mind that whatever she/he is illustrating should be easily recognisable and thus the outcome must be concise and to a large extent, as close to the real object as possible. Otherwise the dictionary user may not be able to decipher the meaning. Stein (1991: 124) cites the following example from *Longman Dictionary of Contemporary English* of the lemma 'cross-legged'.

Example 58: *LDOCE*

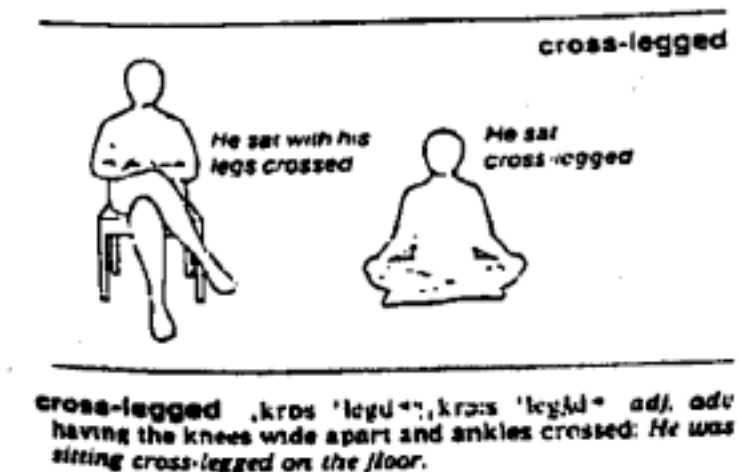


Figure 2.23 Cross-legged

This illustration is very clear as it distinguishes between sitting with one's legs crossed and sitting cross-legged. This illustration is also realistic in terms of size as one can clearly see that this is a person and there will be little room for mistaken identity. This illustration is text-supported as the definition below explains the illustrations further.

2.6 Functions of pictorial illustrations in bilingual dictionaries

Although the foregoing criteria could be applied to dictionaries in general, the emphasis was placed on monolinguals. This section focuses on the functions and use of illustrations in bilingual dictionaries.

According to Gropper (1963: 81) pictorial illustrations can serve two functions in the bilingual dictionary.

1. They cue and reinforce the verbal equivalents especially when the dictionary user can identify, attend to and respond differentially to the picture.
2. They serve as generalising examples when several different but relevant pictures are given in order to establish the concept they intended to illustrate

According to Smith (1960:29) pictorial illustrations help the dictionary user to comprehend and remember the content of the accompanying verbal equivalent because they motivate him, reinforce what is read and symbolically enhance and deepen the meaning of the verbal equivalent.

There are two theories about “pictorial perception”, that is how pictures are perceived. The *stimulus theory* states that perception is the product of the stimulus properties, whereas the *introverted theory* emphasises the role of the perceiver, especially his past experiences, in the perception of pictures.

Linker (1971: 12) accepted a combination of both theories when he said:

'The perception of properties is the product of both the stimulus properties of that picture and the past experiences of the perceiver.'

Al-Kasimi (1977:100) suggests certain objective considerations that pictorial illustrations ought to be subjected to:

1. Pictorial illustrations should be employed whenever they *possess distinguishing properties* as well as when they have more control over the desired concept or over potentially competing concepts than do their verbal equivalents. Al-Kasimi comments that the lexicographer should employ a pictorial illustration when it can univocally cue and reinforce a particular response or establish a particular concept more efficiently than could a verbal equivalent alone. For instance in the *Bilingual Dholuo-English Dictionary* the following lemma *dero* has not only been defined but an illustration has been provided. By looking at the illustrations the dictionary user will clearly understand what the lemma is and will be able to identify it when the see one in real life.

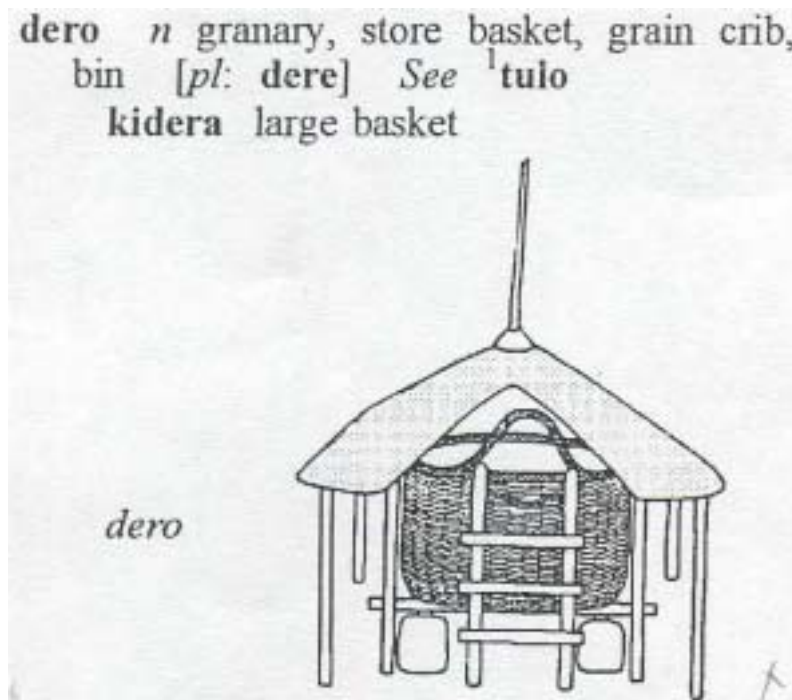


Figure 2.24 Dero

2. Pictorial illustrations should be utilised when the *verbal equivalent requires an uneconomical number of words*. In such cases a brief definition or a short

explanatory equivalent may be supplemented by a pictorial illustration, which gives the dictionary user a fuller understanding of the concept defined. In the Bilingual Dholuo –English dictionary the lemma *chieno* has not only been defined but also illustrated

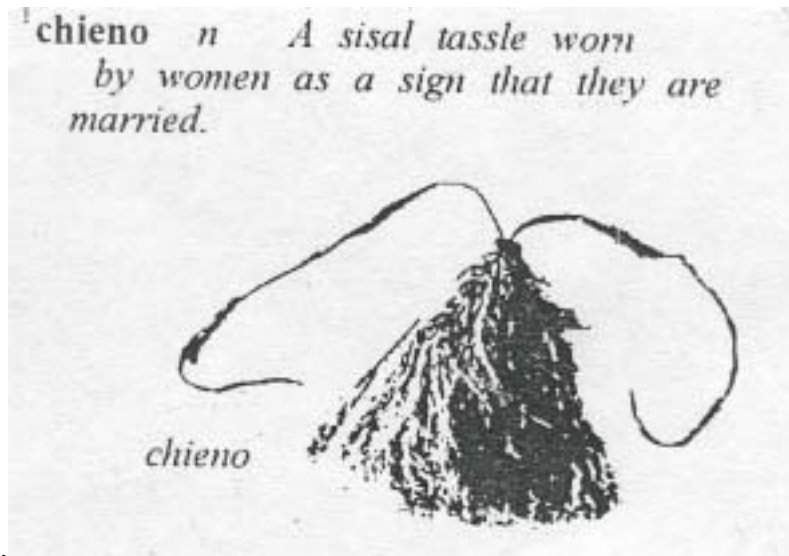


Figure 2.25 Chieno

3. This picture clearly illustrates the concept to which the word refers. By looking at the picture one gets a clearer understanding of the concept *ochindi* as opposed to the definition only.

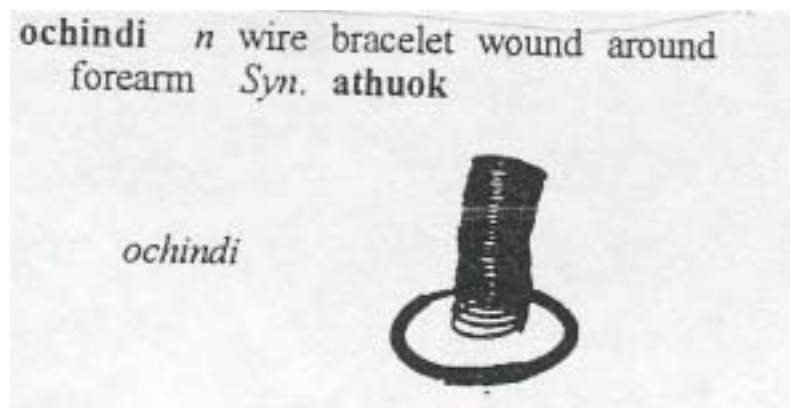


Figure 2.26 Ochindi

The above examples from the *Bilingual Dholuo-English Dictionary* indicates that in cases of zero equivalence – in other words where the target language (in this case

English) does not have a lexical equivalent for the source language item – an illustration may support or elucidate a verbal definition very effectively and efficiently.

The use of illustrations as explanatory devices to compensate for lexical or referential gaps in the target language seem to be a very useful tool in bilingual dictionaries. These examples also suggest that illustrations do have a place in standard (non-pedagogical) bilingual dictionaries and that their inclusion should be given serious consideration by lexicographers dealing with languages that are spoken by divergent cultural groups. The next chapter deals primarily with the effectiveness and efficiency of illustrations in conveying cultural information in dictionaries, with special reference to dictionaries of certain African languages.

2.7 Conclusion

This chapter firstly considered the theories and models that deal with the processing and interpreting of pictures, with special emphasis on their role in the enhancement of comprehension and memory. Though these theories are drawn mainly from educational psychology they are relevant for this study, as a dictionary is an educational resource. Based on the findings of the research done by the educational psychologists, pictorial mediators are better remembered than verbal mediators.

In addition, the different traditions of integrating text and graphics were discussed. Theories and practices in three main scholarly disciplines were outlined, namely document design (focusing on instructional documents), pedagogy and lexicography (special-field lexicography in particular). Based on these traditions a typology for general language dictionaries was developed. This typology is based on the relationship between the text and the illustration.

- a. Self-sufficient (the illustration provides all the necessary information – may be supplemented by text but the latter would be redundant).
- b. Text-supporting (the illustration elucidates one or more aspects of the text).
- c. Text-supported (the text explains the illustration).

- d. Complementary (an interplay of illustration and text is necessary to understand the meaning of the lemma).
- e. Redundant (the illustration either has a purely aesthetic purpose or completely overlaps with the text in terms of its explanatory value)

The chapter is concluded with an overview of the metalexigraphic criteria that have been identified for the inclusion of illustrations in dictionaries – both monolingual and interlingual.

Chapter 3: Use of pictorial illustrations with special emphasis on African language dictionaries

3.1 Introduction

Putter (1999: 51) regards the use of illustrations in dictionaries as a type of definition, which is known in lexicography as 'ostensive definition' or 'ostensive addressing' (in Gouws' terminology). It is normally a type of definition that is used to augment and to elucidate the verbal definition (Gouws 1989: 168; Swanepoel 1990: 186).

This chapter focuses on the role of illustrations in dictionaries to convey cultural information in dictionaries. Firstly, a motivation is given for the inclusion of illustrations in general language dictionaries, and secondly the inclusion of cultural information in dictionaries is defended, with special reference to dictionaries of African languages.

3.2 Including encyclopaedic information in dictionaries

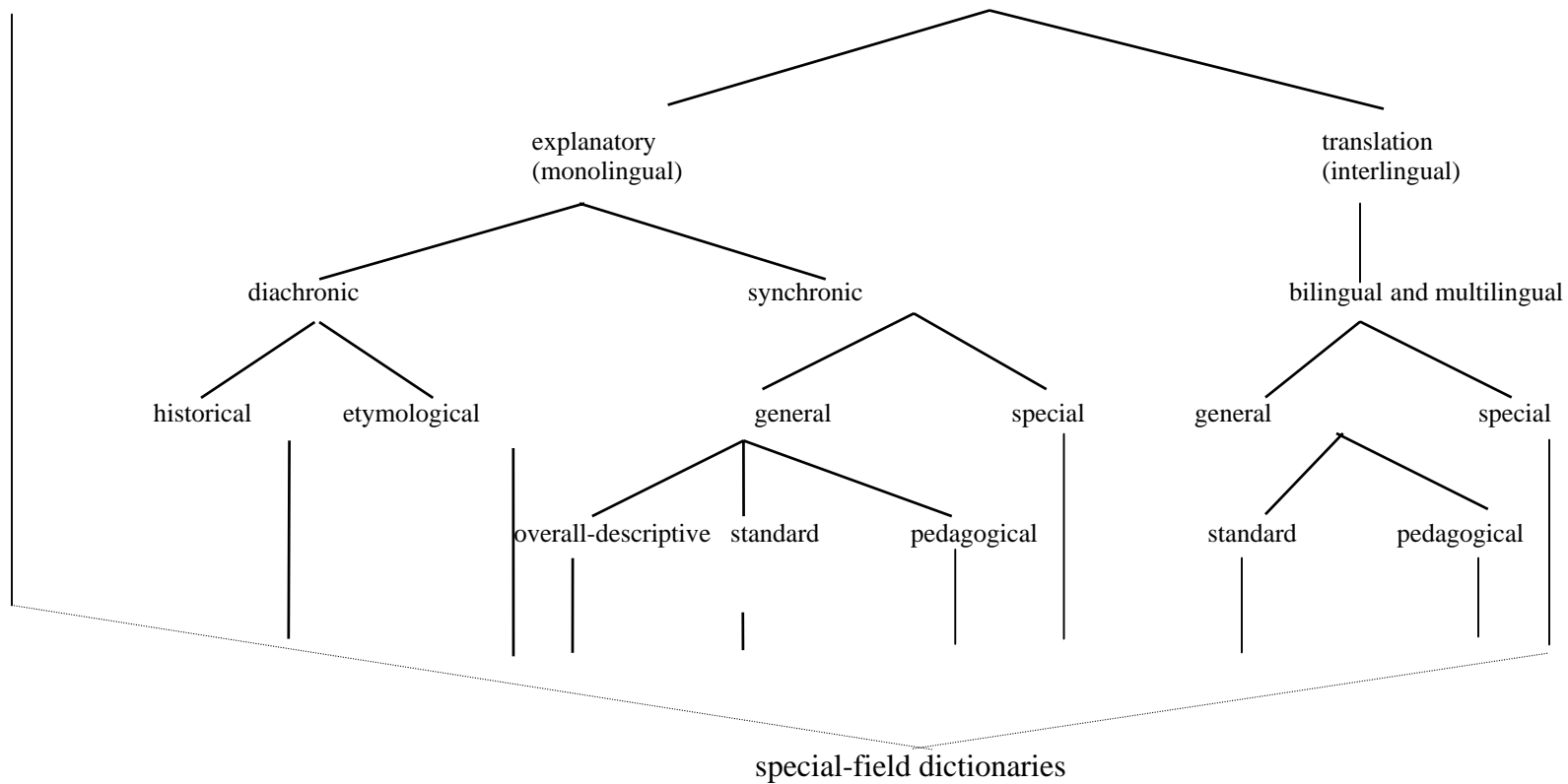
For a long time in the history of lexicography a strict distinction was made between linguistic and encyclopedic (pragmatic, real-world) information. During the nineties lexicographers came to realize that part of what we know about the meaning of a word belongs to what we know about the world around us. This realization led to a less strict division between linguistic and encyclopaedic/pragmatic information; and between dictionaries and encyclopaedias.

Lexicographers also came to realize that the criteria for inclusion of illustrations in different types of dictionaries might differ on the basis of the cultural differences between dictionary users and the culture in which the target language is embedded. This gap would for instance determine how much encyclopedic information should be presented to

bridge the gap. Compare the following representation of dictionary typology , based on Zgusta 1971 (adapted by Carstens 1999)

dictionaries with a focus on the world
encyclopedic dictionaries
(Focus on things in the real world and their characteristic features)

dictionaries with a focus on language
linguistic dictionaries
(focus on words, morphemes, fixed expressions and their linguistic features)



Especially pedagogical dictionaries would benefit from the inclusion of encyclopaedic information, such as illustrations. Due to their comprehensiveness certain overall descriptive dictionaries, such as the *Woordeboek van die Afrikaanse Taal (WAT)* in its first volumes, also included many illustrations. Due to fierce criticism by metalexigraphers during the eighties and nineties fewer illustrations were included and strict criteria for their inclusion were defined.

A type of information that merits the inclusion of illustrations in dictionaries is cultural information. Cultural information in itself may be regarded as a type of pragmatic or encyclopaedic information. In Zgusta's (1988) article entitled *Pragmatics, lexicography and dictionaries of English* he states that since the dictionary is a text couched in natural language, it possesses pragmatic aspects itself. Illustrations may serve as vehicles to clarify and/or disambiguate the meanings of culture-specific words. In this chapter we deal with the role of illustrations in conveying cultural information in both monolingual and bi-/multilingual dictionaries.

3.3 The role of culture in the compilation of dictionaries

Culture is defined as that complex whole which includes knowledge, beliefs, arts, morals, law, custom and any other capabilities and habits acquired by man as a member of society (Tylor 1871).

Casson (1981: 17) on the other hand defines culture as 'idealised cognitive social systems of knowledge, beliefs, and value that exist in the collective minds of individual members of society. It is the mental equipment that society members use in orienting, transacting, discussing, defining, categorising, and interpreting social behaviour in their society.' It is the means by which society members generate appropriate social behaviour and interpret appropriately the behaviour of others.

After considering the cultural setting and the equivalence in bilingual dictionaries one realises that language does not exist in a vacuum but occurs in context, and due to this one clearly sees that there are relationships between the various languages as well as

within a language. One of the important aspects is the cultural context in which a word is used. The cultural context determines its meaning and to a large extent also the ability of a lexicographer to either translate the word into another language or to describe it in that other language.

The lexicographical history of African languages has been dominated by bilingual lexicography. However, this does not mean that all African language dictionaries are bilingual. There are a number of monolingual dictionaries in some of the African languages. In addition to this some of the users of monolingual dictionaries are not mother tongue speakers of the given language, but second language speakers or foreign learners. Since culture is a key factor in this regard, a description and illustration shall be used to illustrate the relevance of the use of pictorial illustration in dictionaries.

The relationship between language and culture is a major issue in cross-cultural communication. Ndoleriire (2000: 272) points out that language can be considered as a cultural practice, and that it is both an instrument to and a product of culture. He further adds that, 'the different languages spoken by different groups of people who have the same culture are used to express cultural norms and practices which are the same in those groups of people.' Therefore, it is apparent that culture is learnt through human interaction and linguistic communication and that both language and communication are functions of culture.

Ndoleriire (2000: 274) further exemplifies that, "individual people learn the values, norms, beliefs, views, and behavioural patterns of their group through linguistic interaction and groups give expression to their cultural identities, and practise their cultural life, not only through music, art, dancing, and dress, but also through language." Accordingly, one clearly sees the link between peoples' way of life and their language. The dictionary being a written record of this language must find a way to carry on the peoples' culture as part of their written heritage. Language is the key component of the dictionary and therefore the lexicographer must look at the best way to describe it. In this regard, where there exist semantic gaps due to culture specific words or ideas it is of

paramount importance that another way to refer to the concept is used. Pictorial illustrations provide an extremely accurate way of representing the concept given that the illustration - whether, photographs or line drawings, full colour illustrations or black and white illustrations - communicate the idea effectively.

According to the Sapir-Whorf hypothesis 'Language and culture are intimately related and language provides a key to understanding culture.' This statement further indicates that language is an important instrument in the totality of culture. The degree of misunderstanding between cultures depends on the degree of difference between the cultures concerned.

A language is a part of culture and a culture is a part of a language; the two are intricately interwoven such that one cannot separate the two without losing the significance of either language or culture (Brown 1987: 123).

Users of bilingual dictionaries, in particular, may benefit from illustrations. According to Zgusta (1988) the most pragmatically effective equivalent of a word in a bilingual dictionary is a translational one; that is an equivalent which is the counterpart of the target language lexical unit in all respects, namely with the same denotations, stylistics levels, and collocations. However, one experiences incomplete equivalence or the absence of any equivalent particularly due to cultural differences. This is not only limited to the cultural-bound words but also differences in the pragmatics and ethnology of speaking. This aspect must be taken into account when compiling a dictionary, particularly a bilingual dictionary and in such instances pictorial illustrations will go a long way in bridging the semantic gap between the languages.

Illustrations should not necessarily have a uni-directional function in dictionaries. According to Zgusta (1988) lexicography strongly takes into consideration the culture of the language described. For instance, a bilingual dictionary of Zoque (Engel and Allhisier de Engel 1987), which has many illustrations, does not use them only to explain

peculiarities of Zoque culture to the speakers of Spanish, but also illustrates cultural items in the other direction. For instance there is an illustration of a boy buying something in a shop because objects and situations like these belong not so much to Zoque culture as to the culture surrounding them. Thus, the dictionary not only explains 'the Zoque culture to the Spanish but also the Spanish culture to the Zoque, certainly a rather novel attitude in a dictionary of a language of a small, rural group. This is in contrast to for instance the *South African Multi-language Dictionary and Phrase Book* where the illustrations are more Eurocentric than African, for instance the rooms in a house include a pantry while the sports played are cricket and rugby. This is despite the fact that this is a multi-language dictionary that covers seven languages and apart from English and Afrikaans the rest are African languages (Northern Sotho, Sesotho, Tswana, Xhosa and Zulu).

In order to determine to what extent and for what purposes African language dictionaries (monolingual or bilingual) use pictorial illustrations, a dictionary survey was done. The following section provides a list of all the dictionaries surveyed together with the findings. This is followed by an analysis of these findings of the dictionary survey.

3.4 Dictionary Survey

3.4.1 Introduction

Stein (1991:106) distinguishes four main types of illustrations in dictionaries:

1. Illustrations showing common animals, objects, plants.
2. Illustrations showing things that are not easily explained in words, such as shapes, complex actions, or small differences between words which are similar but not the same.
3. Illustrations depicting groups of related objects. These explain the differences between similar objects, show the range of shapes and forms covered by a particular word and serve as an important aid to vocabulary expansion.
4. Illustrations showing the basic or physical meaning of words that are commonly used in an abstract or figurative way.

In the following section an analysis of African language dictionaries will be done. The above criteria as stated by Stein (1991) will be used in the analysis of the African Language dictionaries in order to determine to what extent these criteria have been used.

3.4.2 Corpus-analytic research

For this survey the dictionaries were picked at random and scanned for any form of pictorial illustrations. The purpose of the exercise was to determine which dictionaries make use of pictorial illustrations and which types of lemmas are typically illustrated, making use of Stein's (1991) typology outlined above. The survey further considered the placement of the illustrations: in the front matter, the central text or the back matter of the dictionary.

Title of dictionary	Number of illustrations	Items illustrated	Languages	Common animals, objects, plants.	Not easily explained in words	Groups of related objects	The basic or physical meaning of words
KhoeKhoegowab language of Damara, Haillom & Nama	None	None	<ul style="list-style-type: none"> • Damara • Haillon • Nama 	None	None	None	None
Zande English Dictionary	None	None	<ul style="list-style-type: none"> • Zande • English 	None	None	None	None
Tumbuka/Tonga – English English-Tumbuka/Tonga Dictionary	None	None	<ul style="list-style-type: none"> • Tumbuka • Tonga • English 	None	None	None	None
Dictionary of Modern Yoruba	None	None	<ul style="list-style-type: none"> • Yoruba • English 	None	None	None	None
English Xhosa Dictionary	None	None	<ul style="list-style-type: none"> • English • Xhosa 	None	None	None	None
Kikuyu-English Dictionary	None	None	<ul style="list-style-type: none"> • Kikuyu • English 	None	None	None	None
A dictionary of the Yao language	None	None	<ul style="list-style-type: none"> • Yao 	None	None	None	None
Setswana Dictionary	None	None	<ul style="list-style-type: none"> • Setswana • English 	None	None	None	None
A learner's Chichewa and English Dictionary	None	None	Chichewa English	None	None	None	None

Title of dictionary	Number of illustrations	Items illustrated	Languages	Common animals, objects, plants.	Not easily explained in words	Groups of related objects	The basic or physical meaning of words
Bilingual Dholuo – English Dictionary Kenya	Dholuo –97 English-14	<ul style="list-style-type: none"> • Birds • Insects • Plants • Pots • Animals • Fish • Snakes 	<ul style="list-style-type: none"> • Dholuo • English 				
The Concise Multilingual Dictionary	None	None	<ul style="list-style-type: none"> • English • Xhosa • Zulu • Northern Sotho • Southern Sotho • Tswana • Afrikaans 	None	None	None	None
Concise Dictionary English –Siswati	None	None	<ul style="list-style-type: none"> • Siswati • English 	None	None	None	None
Kikuyu-English Dictionary	None	None	<ul style="list-style-type: none"> • Kikuyu • English 	None	None	None	None

Title of dictionary	Number of illustrations	Items illustrated	Languages	Common animals, objects, plants.	Not easily explained in words	Groups of related objects	The basic or physical meaning of words
English-Zulu Zulu – English Dictionary	None	None	<ul style="list-style-type: none"> • Zulu • English 	None	None	None	None
Dikisinare ya Setswana English Afrikaans Dictionary Woordeboek	None	None	<ul style="list-style-type: none"> • Sestwana • English • Afrikaans 	None	None	None	None
Setswana English Setswana Dictionary	None	None	<ul style="list-style-type: none"> • Sestwana • English 	None	None	None	None
Kamusi Sanifu ya Isimu na Lugha	None	None	<ul style="list-style-type: none"> • Kiswahili 	None	None	None	None
Pukuntšu Noordsoto-Afrikaans Afrikaans-Noord Sotho Woordeboek	None	None	<ul style="list-style-type: none"> • Northern Sotho • Afrikaans 	None	None	None	None
Dictionary of Northern Sotho Grammatical terms	None	None	<ul style="list-style-type: none"> • Northern Sotho 	None	None	None	None
Kamusi Sanifu ya Biolojia, Fizikia na Kemia	None	None	<ul style="list-style-type: none"> • Kiswahili 	None	None	None	None
Setswana English Sestwana Dictionary	None	None	<ul style="list-style-type: none"> • Sestwana • English 				
An abridged English-Zulu wordbook	None	None	<ul style="list-style-type: none"> • English • Zulu 	None	None	None	None

Title of dictionary	Number of illustrations	Items illustrated	Languages	Common animals, objects, plants.	Not easily explained in words	Groups of related objects	The basic or physical meaning of words
South African Multi-language Dictionary and phrase book	Has virtual section Section in full colour and 3-D	<ul style="list-style-type: none"> • The human body • The house (a plan and all the different rooms including all their contents) • The office • The car (including instruments and mechanisms) • Sport (cricket, rugby and soccer) 	<ul style="list-style-type: none"> • English • Afrikaans • Northern Sotho • SeSotho • Tswana • Xhosa • Zulu 	•	•	•	•
English -Tsonga Tsonga-English Pocket Dictionary	None	None	<ul style="list-style-type: none"> • Tsonga • English 	None	None	None	None
Pukuntšu Northern Sotho Northern Sotho Afrikaans Woordeboek	None	None	<ul style="list-style-type: none"> • Northern Sotho • Afrikaans 	None	None	None	None

Title of dictionary	Number of illustrations	Items illustrated	Languages	Common animals, objects, plants.	Not easily explained in words	Groups of related objects	The basic or physical meaning of words
New Concise Xhosa-English Dictionary	None	None	<ul style="list-style-type: none"> • Xhosa • English 	None	None	None	None
Lexicon Cilubà-Nederlands	None	None	<ul style="list-style-type: none"> • Cilubà • Nederlands 	None	None	None	None
Woordeboek Afrikaans -Fanakalo, Dictionary English-Fanakalo, Lo Buk ka Lo Izwi Fanakalo – Sibulu-Singis	None	None	<ul style="list-style-type: none"> • English • Fanakalo • Afrikaans 	None	None	None	None
Lexicon Cilubà-Nederlands	None	None	<ul style="list-style-type: none"> • Cilubà • Nederlands 	None	None	None	None
Popular Northern Sotho Dictionary (4 th Ed)	None	None	<ul style="list-style-type: none"> • Northern Sotho 	None	None	None	None
Woordeboek Afrikaans Zoeloe Zoeloe Afrikaans-Isichazimazwi Isibhunu –IsiZulu IsiZulu Isibhunu	None	None	<ul style="list-style-type: none"> • Afrikaans • IsiZulu 	None	None	None	None
Thanodi ya Setswana	Full colour pictures	<ul style="list-style-type: none"> • Different cattle • Trees/plants 	<ul style="list-style-type: none"> • Setswana 	Different cattle Trees/plants	None	None	None

Title of dictionary	Number of illustrations	Items illustrated	Languages	Common animals, objects, plants.	Not easily explained in words	Groups of related objects	The basic or physical meaning of words
Italiano-Swahili Swahili-Italiano	None	None	<ul style="list-style-type: none"> • Kiswahili • Italian 	None	None	None	None
Nuwe Sepedi Woordeboek Afrikaans-Sepedi (Noord Sotho) Sepedi (Noord Sotho) Afrikaans	None	None	<ul style="list-style-type: none"> • Sepedi(Nort hern Sotho) • Afrikaans 	None	None	None	None
Klein Noord-Sotho Woordeboek	None	None	<ul style="list-style-type: none"> • Northern Sotho • Afrikaans • English 	None	None	None	None
New Sepedi Dictionary English – Sepedi(Northern Sotho) Sepedi (Northern Sotho)- Afrikaans	None	None	<ul style="list-style-type: none"> • Sepedi (Northern Sotho) • Afrikaans 	None	None	None	None
Popular Northern Sotho Dictionary	None	None	<ul style="list-style-type: none"> • Northern Sotho • English 	None	None	None	None
TUKI English – Swahili Dictionary. Kamusi ya Kiingereza- Kiswahili	None	None	<ul style="list-style-type: none"> • Kiswahili • English 	None	None	None	None

Title of dictionary	Number of illustrations	Items illustrated	Languages	Common animals, objects, plants.	Not easily explained in words	Groups of related objects	The basic or physical meaning of words
Tsonga-English Dictionary	None	None	<ul style="list-style-type: none"> • Tsonga • English 	None	None	None	None

Table 1: Analysis of African Language dictionaries

Of the thirty-nine dictionaries scanned only three employed the use of pictorial illustrations, namely *Thanodi ya Setswana*, a monolingual dictionary, *Bilingual Dholuo-English Dictionary* and *South African Multi-language Dictionary and phrase book*, which covers English, Afrikaans, Northern Sotho, Sesotho, Tswana, Xhosa and Zulu.

The only African language monolingual dictionary with pictorial illustrations was *Thanodi ya Setswana*. It gives full colour pictures of cows and trees. However, these pictures do not appear in the central text of the dictionary but are given at the end of the dictionary, forming the back matter. The full colour pictures are accompanied by captions that provide the name of the particular the cow or plant in Setswana. One clearly realises the difficulty the lexicographer would be faced with if they opted to describe the different cows or plants. It would probably not be as effective as the pictures used. However, there is no cross reference from the central text to these illustrations in the back matter. The illustrations therefore serve an encyclopaedic function, rather than a lexicographical function.

The Bilingual Dholuo-English Dictionary Kenya has line drawings of birds, insects, plants, pots, animals and fish. The dictionary is bi-directional, but the bulk of the illustrations occur in the Dholuo-English section. Of particular relevance are the illustrations of different kinds of pots. In English there is one word for pot but in Dholuo there are several words for the concept **pot**. In the Dholuo English section of this dictionary, the lexicographer chooses to lemmatise the **pots** alphabetically. The lexicographer chooses to include the word for pot. The illustrations are in the central text of the dictionary.

South African Multi-language Dictionary and Phrase Book has a visual dictionary in the front matter. The contents of the visual dictionary include pictures of the human body, a house (plan, lounge, dining room, kitchen, pantry, bedroom, bathroom, garden), an office, a car (instruments, mechanics, sport (soccer, rugby, cricket). Though these items are illustrated, further analysis will not be done as they fall outside the scope of this study which deals particularly with cultural items.

Based on the findings of the dictionary survey, there is a close correlation between the categories that Stein (1991) gives and the items actually illustrated in these dictionaries. The items that are illustrated across the board include birds, animals, plants and houses. These items fall under Stein's first category of illustrations of common animals, objects, and plants. However, there are differences in the way in which the items are illustrated. In some dictionaries, for example *The Bilingual Dholuo-English Dictionary Kenya*, the lemma 'bird' in the Dholuo-English section of the dictionary are illustrated depending on the Dholuo word for the particular bird whereas in the other dictionaries all the 'birds' are illustrated under the single lemma **bird**.

In the next section the use of pictorial illustrations as ostensive definitions in African language dictionaries shall be considered, with special reference to cultural items. Two classes of cultural objects will be considered on the basis of the problems that their cultural specificity might pose to learners of the particular language:

- (a) basket
- (b) cattle

In showing how a dictionary may facilitate the learning of the lexicon of a foreign language the concept BASKET (as known in English) shall be considered and compared to the same broad concept in Luo, a language spoken in West Africa. In English there is only one generic word but as indicated below the Luo people have different names for different baskets depending on their shape and their function.

In addition to this, the concept CATTLE (termed *cattle* in the English-speaking world) will also be considered. It will be compared with the way in which the Batswana lexicalized this concept, and the way a dictionary of Setswana has dealt with the range of lexical items for cattle by making use of illustrations.

3.4.3 Basket types and their functions among the Luo people of East Africa

According to Ocholla-Ayayo (1980) in an attempt to establish the Luo culture pattern it is thought that one important method is to look at the socio-culture or socio-economic function of the manufactured objects. Below is a list of the different types of baskets.

1. The *atonga* is commonly used for transporting harvested grain from the fields. It is used for the harvesting of sorghum, which is used or is regarded as a traditional Luo food crop.
2. The *odheru* is a dish-shaped basket or similar to a large tray. It is used mainly for winnowing grain.
3. The *asoka*-manufactured by coiled method while the *Adita* is a check weave or twinned weave. They are used to serve food.
4. The *sigol* is a basket screen used on top of an anthill for catching ants as they emerge from the earth.
5. The Luo do not use a basket for more than one purpose. The fowl basket (*osech-gwen*) differs considerably to the fish basket (*osech-rech*). The Luo have three types of fowl baskets.
 - a) *goro* –this is for sitting hens and is often hung by a rope from a roof.
 - b) *osera* –used as a coop on the ground.
 - c) *osech gwen* – used for transportation of fowl to the market and has a closely woven base of wickerwork weave & open hexagonal weave at the top.

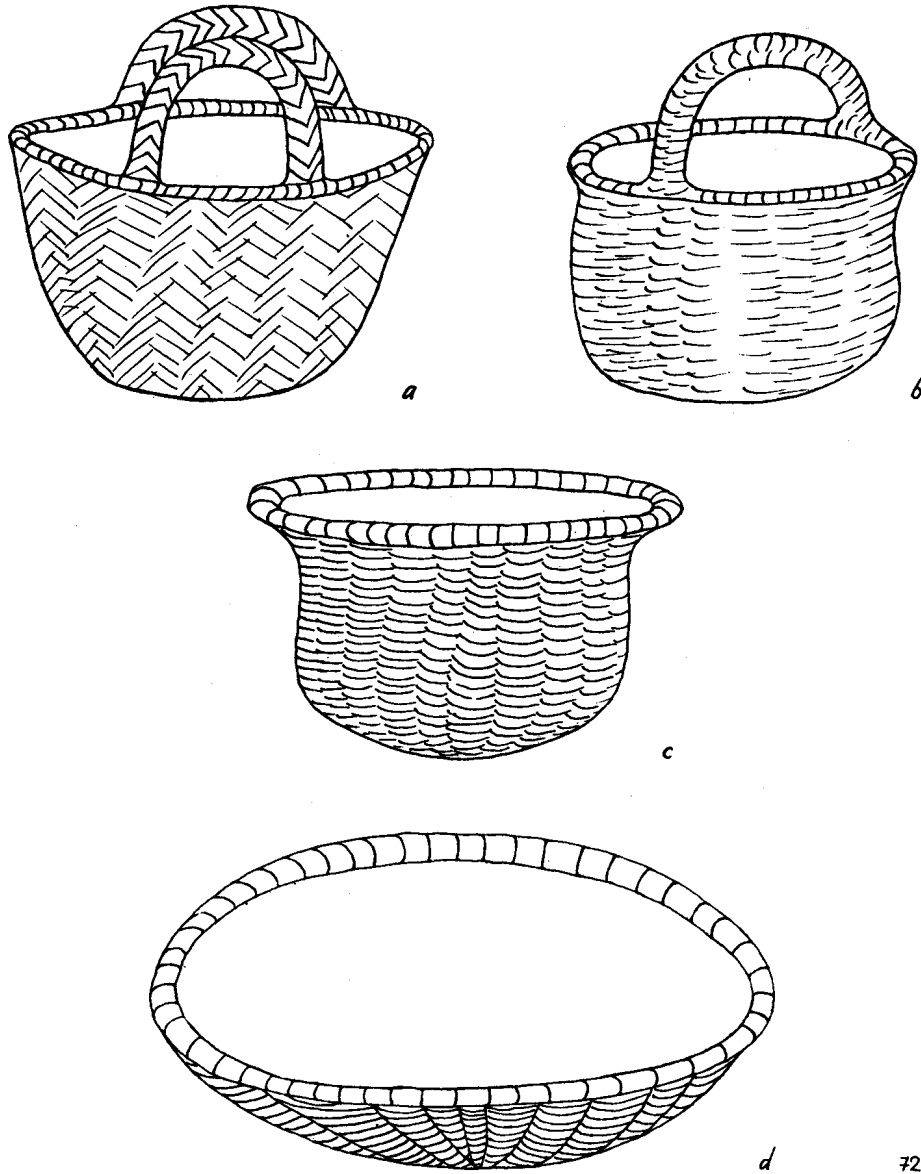


Figure 3.1 Baskets

- a. A vegetable basket (*okapu*)
- b. A market basket called (*aduda-biye*)
- c. A basket for transporting grain to the field called (*atonga*)
- d. A winnowing tray called (*odheru*).

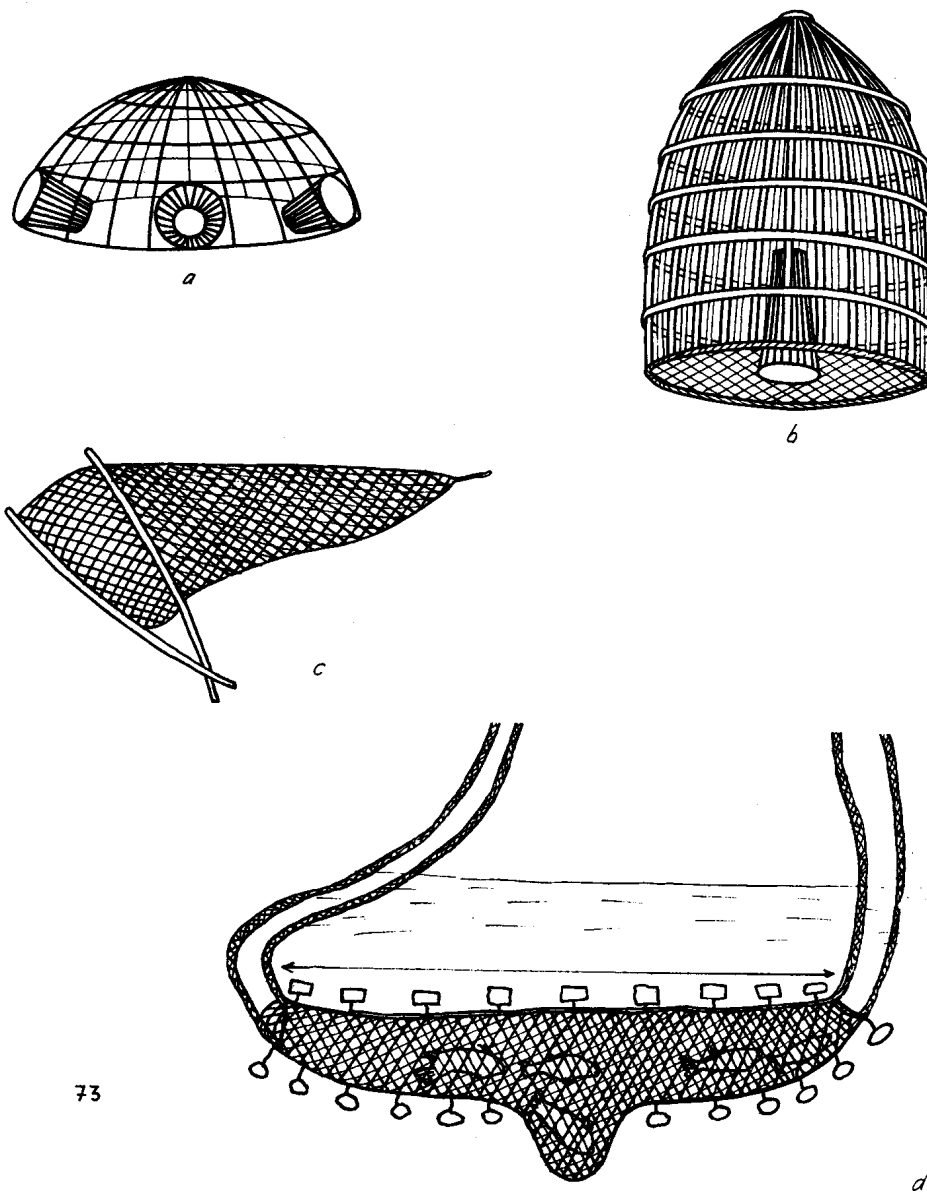


Figure 3.2 Baskets with special uses

a. A bird trap called *osech-winy*.

b. A fish basket called *osech-rech*.

c. A cradle-shaped basket (*lweru*)

d. A large long fish basket (in Lango) or fish net) in Kadem and other southern Luo Tribes) it is called *rimba* or *gogo*.

It stands to reason that without using pictorial illustrations it would be impossible to illustrate the differences between these various baskets. The illustrations above have been reduced to their fundamentals and would therefore be compact if included in a dictionary. To a large extent these illustrations are realistic and even if one has never seen the particular basket illustrated this lack of prior knowledge would not hinder one in understanding what is being defined. The illustrations are also simple and precise. In addition to this, the illustrations have clarity and are easily distinguished. These illustrations therefore meet the criteria for pictorial illustrations as proposed by Al-Kasimi (1977). Furthermore, these illustrations possess distinguishing properties and thus establish the concept of BASKET more efficiently than a verbal equivalent would be able to do. Moreover the verbal equivalent requires an uneconomical number of words and the verbal equivalents may not show the spatial or sequential relationships effectively.

3.4.4 The cattle of the Batswana

According to Breutz (1991:15) among the Batswana people the longhorn cattle are bred exclusively for the size of their horns and the colour, which arouses the enthusiasm of the men, chiefly serve as sacrificial animals and supply the essential portion of bride wealth. This possession constitutes the economic wealth of their owner. The cattle have different names depending on the colour of and patterns on their skin. In *Thanodi ya Setswana* the different cattle are included in the back matter of the dictionary. They are full colour illustrations so that a dictionary user will clearly see the differences between the different cattle. Below are some of the pictorial illustrations found in the *Thanodi ya Setswana*.

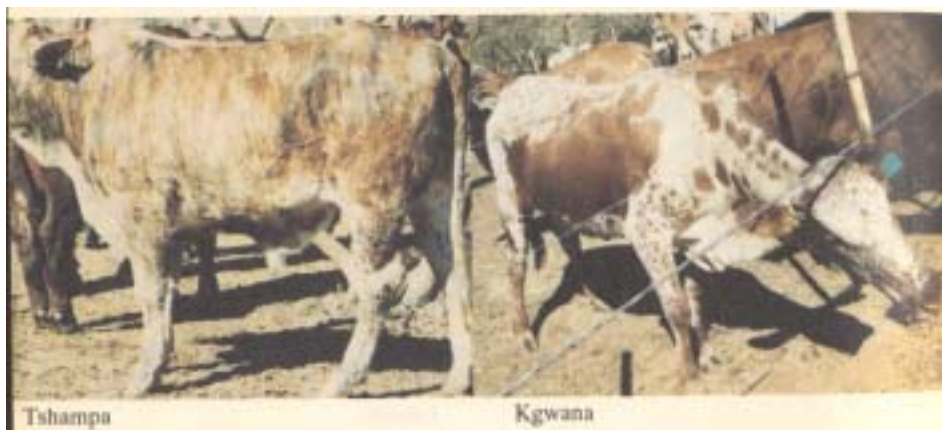


Figure 3.3 Tshampa and Kgwana



Figure 3.4 Nkgwê and Thamaga



Figure 3.5 Bonala jo boramaga and Thaba

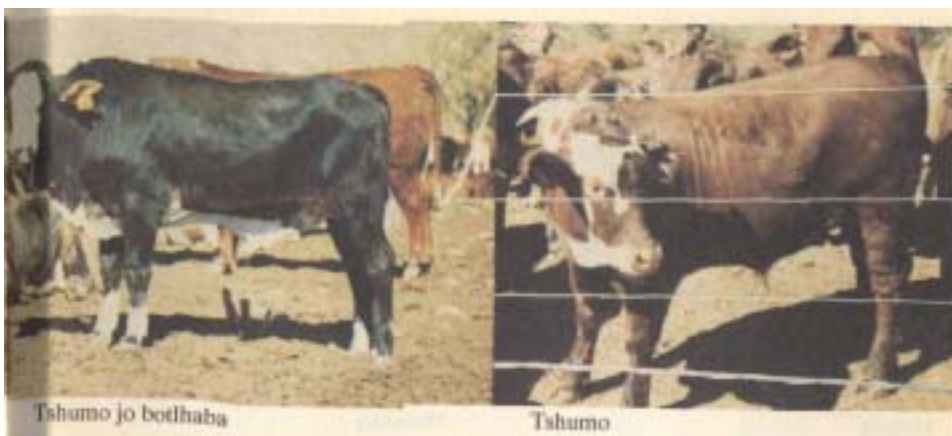


Figure 3.6 Tshumo jo botlhaba and Tshumo

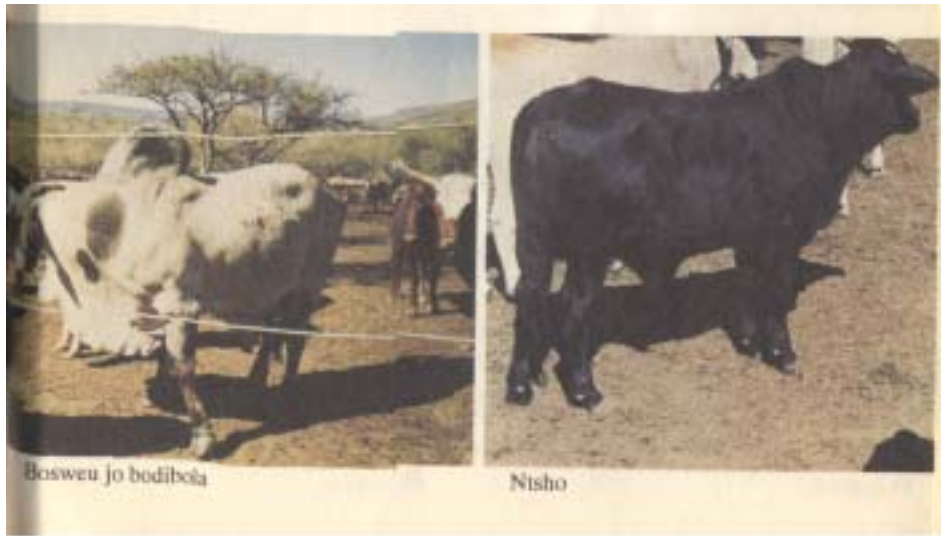


Figure 3.7 Bosweu jo Bodibola and Ntsho

From the above explanations and illustrations one clearly sees how the use of pictures to depict the different concepts, particularly in an African language monolingual dictionary and a bilingual dictionary, can go a long way in evidently showing the differences that would be very difficult to describe verbally.

Due to the fact that the differences between the names of the different cattle is the colour and pattern on their coats, the use of these photographs has made the illustrations very realistic and the illustrations have fidelity. The illustrations are simple and not open to dual interpretation and they are precise as the user's attention is directed only to the colour of the coat of the cattle, which is what is relevant to the desired concept. The illustrations are also complete as each illustration has a caption providing the name of the particular cattle. Furthermore the dictionary user easily distinguishes the features of the illustration thus the illustrations have clarity. (cf. chapter 2 paragraph 2.4)

These illustrations serve the functions proposed by Gropper (1963) as they cue and reinforce the verbal equivalents especially when the dictionary user can identify, attend to and respond differentially to the picture. They also serve as examples as several different but relevant pictures have been given in order to establish the concept of different names for different cattle depending upon the colour and patterns on their coats. Landau

(1989:112) states that photographs are necessary in the case of unidealized individual things. In the *Thanodi ya Sestwana* these illustrations of cattle are included in the back matter and form part of the encyclopaedic section. According to Bergenholtz & Tarp (1995:156) encyclopaedic sections may be explicitly or implicitly integrated in the word list, depending on whether direct cross-references are made from the individual dictionary articles or whether such references are understood. However in the *Thanodi ya Sestwana* there is no cross-reference to the central word list or from the central word list. The illustrations may therefore be included to serve a supplementary function and are comparable to the colour plates in earlier encyclopaedias.

3.5 Conclusion

This chapter demonstrated the function of illustrations as a type of encyclopaedic information in general language dictionaries. It particularly focused on cultural information as a type of pragmatic information, and the facilitating role of illustrations in conveying this type of information.

The corpus-analytic survey showed which African language dictionaries, both monolingual and interlingual, include pictorial illustrations and what items in those dictionaries are illustrated. The results of the survey indicate some correspondence between the categories of illustrations identified by Stein (1991) and the actual items illustrated in these dictionaries. This is particularly the case with the first category of illustrations of animals, plants and objects.

The lexicalization of two conceptual fields were discussed, namely that of the baskets of the Dholuo speakers of East Africa and the cattle of the Batswana of Southern Africa. It was demonstrated how illustrations could facilitate learning and memory of culture-specific words. The use of these two examples does, however, not mean that baskets and cattle are the only items that should be illustrated in dictionaries. There are other items, which should also be illustrated in dictionaries. These include initiation rituals, marriage, other cultural artefacts, cleansing ceremonies as well as other religious rituals.

On the basis of the research it can be concluded that not only pedagogical dictionaries do and should include illustrations. Other dictionary types may also include illustrations, e.g. bilingual and multilingual dictionaries with significant differences between the cultures of the speakers, for instance, a South African Multi-language dictionary. In addition to this, monolingual dictionaries for languages embedded in cultures that have not given way to popular culture but have retained their customs, traditional norms and values like the Luo peoples of East Africa and the Setswana people of Southern Africa. This is important due to the fact that the dictionaries for many African Languages are being compiled for the first time and due to limited resources, these languages do not have different types of dictionaries for instance overall descriptive, standard or pedagogical. For many of the African Languages, a standard monolingual dictionary is still non-existent for instance in Sepedi. As a result, African language dictionaries have to serve many purposes all at the same time. Their target audience ranges from mother tongue speakers, learners, and children to scholars. For this reasons, if lexical items for cultural concepts could be illustrated, it would make these dictionaries accessible to a wider audience.

Chapter 4: Conclusion

Pictorial illustrations in dictionaries are rarely dealt with in the literature on lexicography. Most of the studies used in this work have been based on research on either educational psychology or behavioural psychology and parallels have been drawn with dictionaries. This has been done because a dictionary is an educational resource and since its main aim is to impart knowledge, the principles of how people learn are applicable to dictionaries as well. The importance of pictorial illustrations in dictionaries is not taken seriously. For instance, when the editors of *Webster's Third New International* wanted to accommodate approximately 100,000 new words and word meanings, which had not been recorded in the second edition, they reduced the color plates and illustrations somewhere between one fourth and one third. However, this may partly be attributed to the fact that pictorial illustrations add to the size and cost of the dictionary and it seems that no editor is certain whether they add proportionately to the user's benefit (Al-Kasimi 1977:97).

In general, on the basis of this study it can be said that pictorial illustrations add to the communicative value of dictionaries, aid in bridging the semantic gaps that may occur between languages and saves space, which would otherwise be, taken up by long descriptions of a lemma.

Hayes & Henk (1986:74) state that in their study they found that pictures are useful for sorting out complexity. Pictures supply efficiently some kinds of information ordinarily difficult to extract from prose, information about complicated, relational dimensions and about spatial orientation.

According to Al-Kasimi (1977:99) when the perceiver is familiar with the object pictured, his past experiences play an important role in the process of perception. But when the object pictured is new to the perceiver then it is the stimulus properties of the picture, which will be the determining factor in the formation of the concept. Accordingly, pictorial illustrations can be employed in the bilingual dictionary to

illustrate objects familiar to the user as well as those culture items, which are peculiar to the foreign learner.

Based on the findings of the dictionary survey done in this study, there are particular items that were illustrated in these dictionaries. These were birds, insects, plants, animals, furniture and parts of the human body. In view of the fact that these items were found in more than one dictionary indicate that there is a pattern as to what is typically illustrated in dictionaries. An interesting addition to this is that in *The Bilingual Dholuo-English Dictionary Kenya*, in addition to these other categories of objects illustrated, “pots” which are a cultural item are also illustrated. In the *Thanodi ya Sestwana* there are illustrations of the Batswana cattle as well as plants. Stein (1991:106) distinguishes four main types of illustrations:

1. Illustrations showing common animals, objects, plants.
2. Illustrations showing things that are not easily explained in words, such as shapes, complex actions, or small differences between words which are similar but not the same.
3. Illustrations depicting groups of related objects. These explain the differences between similar objects, show the range of shapes and forms covered by a particular word and serve as an important aid to vocabulary expansion.
4. Illustrations showing the basic or physical meaning of words that are commonly used in an abstract or figurative way.

Culture specific terms can be added to the above main types particularly in an African Language dictionary. Whether monolingual descriptive or a bilingual dictionary any lexicographer will encounter certain lemmas that will be either difficult to translate to another language or describing it would take up much needed space. Thus the use of pictorial illustrations will be effective.

On considering the pictorial illustrations found in the dictionaries surveyed, the ideal criteria as specified by Al-Kasimi (1977:100-102) have been met. The illustrations are compact as visual noise has been avoided and have fidelity, as they are realistic. The interpretability of the message conveyed is easily understood. They are relevant as they are related to the user's past environmental and realistic experiences, which are determining factors in his success in the interpretation of the picture. The pictures are simple and precise. The use of captions and titles aid in making the illustrations complete whereas the appropriate size and adequate artistic performance make the pictorial illustrations clear.

According to Al-Kasimi (1977:100) the lexicographer should know their physical and behavioural attributes and the essential principles of designing pictures for lexicographical undertaking. The following recommendation by Al-Kasimi (1977:102) should be applied by the lexicographer in order to make pictorial illustrations precise. He states that the most effective attention directing and modifying devices are:

- i. Arrows indicating the points of interest in the picture.
- ii. Reduction of irrelevant information in the pictorial illustration.
- iii. Colour cues to indicate the most important feature of the picture.
- iv. Position cues which imply that the most important portion of the picture should be placed in the centre or upper left of the illustration.
- v. Identifying numbers, which correspond to verbal modifiers such as title and captions.

In addition to this Al-Kasimi states that though these are what he considers as the ideal criteria for pictorial illustrations in dictionaries, it is only intended as a point of departure for the use of pictorial illustrations in bilingual lexicography and further research is recommended.

Spaulding (1956:31-46) presented six generalisations, which are the factors that influence the communicative potential of pictorial illustrations. Based on his studies and his findings it can be concluded that an illustration as such has no educative value and may even be a detracting influence if the drawing content has not been presented in terms of

the past experience of the intended audience. Nevertheless, this does not imply that visual material, which depicts actions or object unfamiliar to the viewer, cannot be used. On the contrary, care must be taken to use the visual construction in a careful context with other illustrative and textual material, in much the same manner as a new word is introduced contextually in foreign language “direct method” texts.

In addition to this, Spaulding (1956:45) adds that illustrations that are intended to communicate specific ideas will be most effective if:

- The number of objects that must be seen to correctly interpret the illustration are kept to a minimum.
- The number of separate actions necessary to correctly interpret the basic message of the illustration is kept to a minimum.
- All objects and inferred actions are realistically portrayed and not open to dual interpretation or secondary inference.

Spaulding (1956:46) further adds that colo(u)r in illustrative material adds to the interest potential of the drawings. However, unless used realistically and functionally colo(u)r may detract from the communication potential of the drawings and whereas caption, in general, usually serve to add information which is difficult to depict pictorially, they should usually not be used to explain the illustration, but rather to generalize, modify, relate and extend the meaning of the illustration.

Linker (1971:30) argues that all consideration of the possible values of realistic colour has to be speculative, as no empirical test has demonstrated specific values. The studies that were reviewed tended to suggest potential values for realistic colour in the areas of interest and arousal. Such values have been inadequately studied. No study has been reported which attempted to identify an interaction between individual aptitudes and the colour or black and white modes.

The dictionary survey, which was used to determine which dictionaries employ pictorial illustrations, was limited to only forty-five dictionaries. Four of these were English monolingual dictionaries and one was an Afrikaans monolingual dictionary. The sample was not representative of all the African languages and for some of the languages there was more than one dictionary. This limitation partly due to the fact that the study was limited to dictionaries available in the Merensky library at the University of Pretoria and additional dictionaries obtained in the Department of African languages at the University of Pretoria. As a result of this, most of the African languages dictionaries are of African languages spoken within South Africa.

Though an examination of the pictorial illustrations included was done, at this stage the purpose of the dictionary survey was to investigate which objects are illustrated if any, in these dictionaries. There was an attempt to establish if there is a kind of pattern in what is illustrated.

The inclusion of English and Afrikaans dictionaries was to compare what objects they illustrate to those illustrated in the African languages dictionaries and see to if there are any similarities or differences. The English dictionaries in particular showed the inclusion of numerous pictorial illustrations. This may be attributed to a number of factors including a well-developed and highly competitive lexicographical department within the English Language industry with a varied target market ranging from first language speakers of English, second language speakers of English and foreign language learners of English with varied needs. The comparison was therefore not effective due to a number of factors including the dissimilar availability of resources.

The relative limited research done on pictorial illustrations in the lexicographical field, particularly “African lexicography”, made it difficult to limit theories and principles to lexicography per se and a great deal of borrowing as done from other fields.

The scope of the study was also limited as this is a broad field that needs much more work and this study touches on the basis of inclusion of pictorial illustrations in

dictionaries and particularly African Language dictionaries which are still being developed for some of the languages.

However, further research should be done into the analysis of pictorial features in order to develop and cultivate the culture of inclusion of pictorial illustrations in dictionaries so that their explanatory value will be realised by lexicographers.

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