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**THE RELATIONSHIP BETWEEN  
VISUAL AND VERBAL CODES OF VISUAL RHETORIC IN A  
SEQUENTIAL ART SETTING**

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Dissertation submitted in fulfilment of the requirements for the degree Magister Technologiae in the Department of Visual Arts and Design, Faculty of Human Sciences, Vaal University of Technology.

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Prof. R. J. Gaede

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The financial assistance of the Vaal University of Technology towards this research is hereby acknowledged. Opinions expressed and conclusions arrived at are those of the author and are not necessarily to be attributed to the Vaal University of Technology.

...the more you know about visual communication, the more you will see.

**Paul Martin Lester (1995)**

## DECLARATION

This dissertation is the result of my own independent work, except where otherwise stated. Other sources are acknowledged by giving explicit references. A bibliography is appended.

Signed: .....

A handwritten signature in black ink, consisting of several vertical strokes followed by a large, sweeping flourish that extends to the right.

Date: ..... Nov. 2007 .....

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## ABSTRACT

The aim of the study was to examine the relationship between visual and verbal codes of visual rhetoric in a sequential art setting. The literature investigation component of the study covered: (1) the notion of visual literacy; (2) the principles of visual rhetoric, and (3) trends in sequential art. The empirical component of the study involved the production of sequential art test material with an accompanying questionnaire in order to measure the comprehension of visual rhetoric in a sample of 197 undergraduate students at the Vaal University of Technology. The working hypotheses that guided the study were, firstly, that the comprehension of the visual code of the visual rhetoric used in a sequential art setting differs between (a) study participants that received visual training prior to the data collection and (b) study participants that received no visual training prior to the data collection, and, secondly, that the comprehension of the visual code of the visual rhetoric used in a sequential art setting differs between (a) study participants that received test material in their home language and (b) study participants that did not receive the test material in their home language. Following a one-way ANOVA analysis of the questionnaire data, the first hypothesis indicated a significant statistical difference ( $p=0.00$ ) and was not rejected. The second hypothesis indicated no significant statistical difference ( $p=0.138$ ) and was rejected. Based on the result obtained, possibilities for further research were formulated.

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## LIST OF ABBREVIATIONS

FIA	Fédération Internationale de l'Automobile
N	Number of students
NS	Not Significant
PSYOPS	Intelligence Agency's Psychological Operations Division
RNVT	Received No Visual Training
RVT	Received Visual Training
S	Significant at the .05 level
SPSS	Statistical Programs for the Social Sciences
UJ	University of Johannesburg
USA	United States of America
USPC	United States Pharmacopeia
VUT	Vaal University of Technology

# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction to the field of study

Since this study examines the relationship between visual and verbal codes in a sequential art document, an in-depth knowledge of visual literacy and the various aspects that form the basis thereof will be explored to distinguish the various characteristics of visual codes of visual rhetoric. In the context of this study, verbal literacy - or in general terms, a literate person - will be defined as someone who has the ability to read, write and interpret verbal codes or written messages (Dondis 1973:12). Sinatra (1986:4) refers to a verbally literate person as one that knows how to use the language system appropriately in order to communicate personal and social needs on any particular occasion. In Chapter 2 various definitions of visual literacy will be explored before the core meaning of the terminology and its relevance to the visual codes that form part of this study are established.

Sequential art or narrative art is more widely known as comic strips, comic books or comix in Western countries and as manga, primarily in Japan (Saraceni 2003:3). Most recently the potential of this medium as an educational tool and as entertainment has been realised in Europe, the USA and Japan, and further developments in Europe have aligned this particular medium with high literature, fine arts and film (Comics Brew 2004). Sabin (1993, in Berger 1998:133) points out that critics see comics, per definition, as a childish sub-literature, a view that is partly formed by prior conditioning, seeing that comics are read by children. The conclusion is drawn that it therefore must be childish. Berger (1998) states that critics are unaware that the mixture of images and words found in comic books has an enormous resonance and power. He continues that this distinctive medium is a

wonderful form of telling stories and that it can be utilised as a resource for teaching. Eisner (1985:7) refers to an article by Tom Wolf which was published in the Harvard Educational Review (August 1977). It summarised reading in the following way:

For the last hundred years, the subject of reading has been connected quite directly to the concept of literacy ... learning to read ... has meant learning to read words ... But ... reading has gradually come under closer scrutiny. Recent research has shown that the reading of words is but a subset of a much more general human activity which includes symbol decoding, information integration and organisation ... Indeed, reading – in the most general sense – can be taught as a form of perceptual activity. The reading of words is one manifestation of this activity; but there are many others – the reading of pictures, maps, circuit diagrams, musical notes ...

## **1.2 Aims and objectives of the study**

The aim of the study is to investigate the relationship between the visual and verbal codes of visual rhetoric in a sequential art setting.

The objectives of the study are: (a) to review literature on visual literacy, (b) to review literature on visual language and visual rhetoric, (c) to review literature on trends in sequential art, and (d) to conduct fieldwork to measure the comprehension of visual rhetoric in a sample of undergraduate university students at the Vaal University of Technology.

## **1.3 Research question**

The research question formulated for this study in essence centres on how essential the verbal code in a sequential art document is for the intended meaning to be conveyed.



## 1.4 Hypotheses

The hypotheses of the study are as follows:

Hypothesis 1: The comprehension of the visual code of the visual rhetoric used in a sequential art setting differs between (a) study participants that received visual training prior to data collection (the RVT group) and (b) study participants that did not receive visual training prior to data collection (the RNVT group), and

Hypothesis 2: The comprehension of the visual code of the visual rhetoric used in a sequential art setting differs between (a) study participants that received test material in their home language and (b) study participants that did not receive the test material in their home language.

The null hypotheses accordingly are:

Hypothesis 1: The comprehension of the visual code of the visual rhetoric used in a sequential art setting will not differ between (a) study participants that received visual training prior to data collection (the RVT group) and (b) study participants that did not receive visual training prior to data collection (the RNVT group), and

Hypothesis 2: The comprehension of the visual code of the visual rhetoric used in a sequential art setting will not differ between (a) study participants that received test material in their home language and (b) study participants that did not receive the test material in their home language.

## **1.5 Research design and methods**

Durrheim (1999:29) points out that a research design is a strategic framework that links the research questions and the actual implementation of the research. This framework describes what the participants of the study will do in order to reach a specific outcome. A conclusion may then be formed about the research question. This study will make use of a quantitative research method that employed both open- and closed-ended questions. The design of the empirical section, which constitutes the second part of this research project, included the production of sequential art test visuals with an educational theme that included humanoid life forms. One of the main reasons for using a sequential art document was its visual capabilities as a educational tool and its ability to reach a multicultural society which formed part of the sample of undergraduate university students. The theme of the sequential art document was road safety guidelines, and the main characters were crash test dummies.

In order to establish the relationship between the visual and verbal codes in a sequential art document, the study population received a single sequential art document which had been translated into one of the following languages (verbal code), English, Sesotho or Magyar (Hungarian). The visual code to all three of the documents was kept identical. Thus the relationship between the visual and verbal codes was established according to the extent of the comprehension of the study population which received the document either in their primary home language (English or Sesotho) or a secondary language (English or Sesotho) or a foreign language (Sesotho or Magyar). None of the recipients of the study population was versed in the foreign language version of Magyar.

## **1.6 Definition of terms**

The following key terms are employed in this study. A number of the key terms have been further refined and analysed in the subsequent literature review chapters.

- **Visual literacy:** Messaris (1994) describes visual literacy as the necessary knowledge and know-how about the inner workings of visual images. This includes a group of skills that will ultimately, facilitate the intentional use of visuals as a communication tool.
- **Sequential art:** This term was coined by Eisner (1985) and encompasses the medium of comic books and graphic novels. McCloud (1993) defines comics (sequential art) as “juxtaposed pictorial and other images in deliberate sequence, intended to convey information and/or to produce an aesthetic response in the viewer”. The terms *sequential art* and *comic books* will be used interchangeably in the following chapters. This is a direct result of the findings of the pilot phase of the test visuals and questionnaires. (See Chapter 5.)
- **Semiotics:** In essence, semiotics is the study of signs (Bamford 2003) and how signs transmit information between humans to make comprehension possible (Johanson 1993).
- **Rhetoric:** Horn (1998:181) defines rhetoric as elements of documents that are utilised for navigation and organisational functions with the intentional objective of influencing a reader’s viewpoint in a variety of ways.
- **Trope:** The figurative or metaphoric use of pictures as a means of visual rhetoric (Kennedy 1994:207).
- **Visual code:** Braden (1996:496) explains that a visual code commonly refers to communication that includes various types of visual forms (images, signs, symbols, illustrations, pictures and graphics). Lohr (2003:27) also points out that visuals as a communication form are not verbal in nature.
- **Verbal code:** Text that is organised into chronological units comprises the verbal code (Saraceni 2003:5).

## **1.7 Overview of chapters**

The structure of the dissertation may be divided into two sections. The first section (Chapters 2-4) covers the literature review and the second section (Chapters 5-6) contains the research methods and the empirical data.

Chapter 2, of this study, embarks on defining visual literacy and describing the competencies that are required in order for a person to be categorised as a visually literate person (Burmark 2002:3). The chapter further explores concepts of visual literacy as formulated by Thibault and Walbert (2003) and Braden (1996). Chapter 2 continues with a breakdown of visual messages to their basic visual elements. Dondis (1973) points out that this is an action that assists one to obtain the necessary visual literacy skills, by showing how they function. These sets of basic elements are then further analysed and subsequently evaluated according to the Gestalt principle, which states that the organisation of the whole image is more than the sum of its parts (Nobel and Bestley 2005).

Chapter 3 explores the concepts of visual language and visual rhetoric and assesses the role that syntactic and semantic properties play in any form of communication (see Messaris 1997:viii). The integration of various units or elements that constitute a visual language as described by Horn (1998), is also scrutinised. Chapter 4 examines the components of sequential art (comic books) and carefully analyses how the components function and interact to illustrate and narrate a work of fiction successfully. An in-depth analysis is done of the visual/verbal relationship according to the work of Saraceni (2003) and McCloud (1993) that makes it clear that there are several distinct categories to describe the visual/verbal relationship.

Chapter 5, of the study, deals with the research design methods. It discusses the systematic approach to designing a sequential art document (test visuals) and the approach that was undertaken for the development of the research questionnaire. The profile of the study population is also analysed. Chapter 6

covers the data analysis and the evaluation of the research hypotheses and finally, examines the results of the empirical study. Chapter 7 concludes this study and lists the limitations contained within the study. Secondly it highlights the recommendations and contributions and finally addresses the areas for possible future research.

## CHAPTER 2

# VISUAL LITERACY

### 2.1 Introduction

Lester (1995) suggests that “visual literacy allows an individual to slow down the fast-paced stream of images so that a person can study a picture for a longer period of time”. At the core of visual literacy is the ability to decipher and interpret visuals that have been assembled from various visual elements in such a manner that it makes sense. The initial part of this chapter will focus on defining visual literacy, and on discussing what it constitutes to be considered visually intelligent and how these various levels of visual intelligence influence a person’s perception of this form of communication.

This chapter will also focus on the four visual cues that humans are designed to notice and how these visual cues are constructed from the basic components that are to be found in every image, whether it is a natural or a manipulated image. The basic components will also be examined, since they are the building blocks on which a visual image is produced and because the knowledge of how these components function is vital in the acquisition of the necessary visual literacy skills. The last part of this chapter will focus on the structural forces that determine how these various visual elements are presented and with what prominence.

Specific reference will be made to the Gestalt principles, and particularly to how these principles influence the way in which humans formulate the meaning of an image and how the image influences our understanding of the underlying messages. This chapter will eventually demonstrate that visual literacy skills are necessary to fully understand visual images.

## 2.2 Defining visual literacy

### 2.2.1 Visual literacy competencies

The term *visual literacy* was first coined by John Debes in 1969. Debes (1969:27, in Avgerinou 2005), describes visual literacy in the following way:

Visual literacy refers to a group of vision-competencies a human being can develop by seeing and at the same time having and integrating other sensory experiences. The development of these competencies is fundamental to normal human learning. When developed, they enable a visually literate person to discriminate and interpret the visible actions, objects, symbols, natural or manmade, that he encounters in his environment. Through the creative use of these competencies, he is able to communicate with others. Through the appreciative use of these competencies, he is able to comprehend and enjoy the masterworks of visual communication.

Sinatra (1986) also points out that according to Debes and Williams (1978), visual literacy is the foundation for the concept of visual language, and that visual language is the use of visual signs and symbols in a systematic fashion to facilitate successful communication. Jerry Christopherson (Burmark 2001:3) lists the following competencies of a visually literate person:

- To interpret, understand, and appreciate the meaning of visual images;
- Communicate more effectively by applying the basic principles and concepts of visual design;
- Produce visual messages using computers and other technologies; and
- Use visual thinking to conceptualise solutions to problems.

To fully comprehend visual codes, it is necessary to understand the concept

of visual literacy. Thibault and Walbert (2003), as well as Braden (1996), regard visual literacy as the ability to view, to comprehend and ultimately to think, create, and communicate graphically. Thibault and Walbert (2003) explain that a visually literate viewer will examine an image carefully and critically with a view to recognise the intentions of the originator or creator of the image. A range of definitions exist for visual literacy. According to Sinatra (1986:57), visual literacy is fundamental to human thinking. He points out that it has evolved through the interaction of three basic components, namely viewing, exploration and nonverbal representation. Sinatra (1986) furthermore states that visual literacy is defined as the active reconstruction of past visual experiences with that of incoming visual information to obtain a meaningful understanding. Sinatra (1986) regards the skills level of a visually literate person as of the utmost importance as it is this factor that will influence how well an individual will decode and code visual information.

### **2.2.2 Characteristics of a visual message**

Dondis (1973) argues that by breaking down visual communication into its basic components, it will become much easier to acquire visual literacy skills if one understands how the components function and how they are applied in communication in principle. Visual messages consist of three distinctive and individual levels. The basic characteristics are symbol systems, representational visual materials, and the abstract under-structure or form that we see. Symbol systems, according to Dondis (1973:13), refer to a world of symbols that identify actions or organisations, moods, direction-symbols ranging from those rich in representational detail to those that are completely abstract and so unrelated to recognisable information that they must be learned in the same way we learn language. Representational visual material entails images that we see or recognise in our physical environment. It is visual material that we are able to replicate in drawings, paintings, sculpture, and film. Dondis (1973:14) also points out that the representational level of visual intelligence is governed strongly by direct experience which extends beyond our perception. The final level of visual intelligence is the abstract



understructure or form which refers to the most basic or natural visual message in everything we see. This kinaesthetic quality of a visual also emphasises the more direct, emotional approach to message making (Dondis 1973:67). Dondis (1973) further points out that the technique of reduction of the basic visual elements is also a process of abstraction which has huge importance since it leads to the understanding and structuring of a visual message. Ehrenzweig (in Dondis 1973:14) elaborates on the structural levels of visual mode:

Another way of analyzing this duplex system of seeing is to recognize that everything we see and design is composed of the basic visual elements, the skeletal visual force, crucial to meaning and powerful to response. It is inextricably part of all we see, whatever its nature, realistic or abstract. It is the pure, stripped-down visual energy.

These three distinctive levels of visual expression overlap, interact with and enhance the individual qualities of each other in such a manner that visual problems can thus be overcome more readily (Dondis 1973). The necessary visual literacy skills can be acquired if one becomes aware of and understands these three levels of a visual message (Dondis 1973).

### **2.3 Components of visual communication**

Thibault and Walbert (2003) contend that the first level of visual literacy skills requires the examination of a visual image by means of deconstructing an image to its basic elements. They further state that a higher level of visual literacy skills is then required for critical thinking which focuses on how these elements relate to the whole. Saint-Martin (1990) considered the mechanisms and structure of visual perception and accordingly formulated the foundation for the basic unit of visual communication. This basic construct of visual communication is the coloremé, which refers to a “zone of the visual linguistic field correlated to a centration of the eyes” (Saint-Martin

1990:5). The coloreme is constructed from a cluster of “visual variables” and both the creator and the observer are equally dependent on the perceptual relations of these elements (Saint-Martin 1990:17). Saint-Martin (1990) describes visual variables as “colour/tonality, boundaries (which produce form), texture, dimension, vectoriality, and position in the plane”. Dragga and Gong (1998:133) point out that, according to Bertin, the human eye is receptive to six visual or retinal variables. These authors listed the elements size, value (lightness/darkness), texture (patterns of dots and lines), colour, orientation (horizontal, vertical and diagonal planes) and shapes.

Dondis (1973) also examined the basic design elements in visual communication that form the compositional source for all kinds of visual material and visual messages. He identified the basic design elements as line, shape, direction, tone, colour, texture, scale/proportion, dimension, and motion (Dondis 1973:39). However, Lester (1995) implies that the various visual elements/components (variables) that we see are due to the four visual cues that the human brain is designed to observe. The four basic visual perception cues are colour, form, depth and movement (Lester 1995) and these cues encompass all the various visual elements as identified by Saint-Martin (1990), Bertin (Dragga and Gong 1998:133), Berger (1998) and Dondis (1973). Lester (2006) further elaborates that every visual stimulus, whether it is stationary, moving, authentic or illusionary, can be broken down to the basic visual components. These basic elements enable humans to analyse and create visual messages more easily, and therefore ultimately aid in achieving higher levels of visual literacy (Lester 1995). An overview of the basic visual elements as identified by Dondis, Bertin, Saint-Martin, Berger and Lester, is provided in Table 2.1.

**Table 2.1** Overview of the basic visual elements

<b>Basic visual elements according to:</b>				
<b>Lester (2006)</b>	<b>Dondis (1973)</b>	<b>Bertin (Dragga and Gong 1989)</b>	<b>Saint-Martin (1990)</b>	<b>Berger (1998)</b>
<b>Colour cue</b> - colour (objective, subjective, comparative)	- colour - tone - dots	- colour - value (light/dark) - lines (texture) - dots (texture)	- colour - tonality - boundaries	- colour - dots - lines
<b>Form cue</b> - dots - lines - shapes	- lines - shapes - scale - proportion - texture	- shapes - size - orientation	- texture - dimension - position in the plane - vectorality	- shapes - volume - scale - spatiality
<b>Depth cue</b> - space of visual array - size relative to the frame - colour - lighting - texture gradients - interposition - time - perspective (illusionary, geometrical, conceptual)	- dimension - motion			- balance - direction - lighting - perspective - proportion
<b>Movement cue</b> - real - apparent - graphic - implied				

### **2.3.1 Colour**

Colour can be analysed according to three methods, namely the objective, subjective and comparative method (Lester 1995). The objective method states that colour can be scientifically measured according to temperature and wavelength (Lester 1995). The comparative method entails the comparison of a colour to an agreed, known description, such as blood red, and according to the subjective method, the mental state of a human determines the emotional response to a particular colour (Lester 1995).

Colour carries with it a broad category of symbolic meanings, which is another factor that makes colour gravitate largely towards our emotions (Lester 1995). Colour is loaded with information, which makes it an invaluable source for visual communication. In the environment we share a general connotation of the colour of trees, grass, sky and numerous other objects and we see colour as a common stimulus, therefore we associate similar meaning (Dondis 1973). Dondis (1973:55) further states:

Since perception of colour is the single most strongly emotional part of the visual process, it has great force and can be utilized to express and reinforce visual information to great advantage. Colour not only has universally shared meaning through experience, but it also has separate worth informationally through symbolically attached meaning. In addition to the highly negotiable colour meaning, each of us has our own personal and subjective colour preferences.

Each colour has many meanings, both associative and symbolic, and therefore offers an enormous vocabulary, which is extremely useful in visual literacy. Colour has three dimensions which can be defined and measured (Dondis 1973). The first dimension is that hue or chroma is the colour itself, of which there are more than a hundred. Every individual hue has its own

individual characteristic and groups or categories of colour share common effects. Dragga and Gong (1989) mention that in this vast range of hues there are three primary or elementary colours (red, yellow and blue), and three secondary colours (orange, green and violet). These specific primary and secondary colours constitute the colours for the pigments used in paints and inks for printing presses and must not be confused with the three primary colours of light (visible light wavelengths) that humans see. The three colours are red, green and blue and each of these colours can be accurately measured by the location of its wavelength on the electromagnetic spectrum (Lester 2006).

The second dimension of colour is saturation, which refers to the purity of a colour from the hue to grey. The more intense or saturated a colour is, the more highly charged is it with expression and emotion (Dondis 1973) and ultimately the more memorable the colour will be (Berryman 1990). The third dimension of colour is achromatic, which refers to the relative brightness, from light to dark, of value or tonal graduations. Dondis (1973) also points out that the presence or absence of colour does not affect tone, which stays constant. Tone is the relative presence or absence of light and the variations in light or tone are the means by which we optically distinguish visual information in the environment (Dondis 1973). Lightness and darkness play such an important role in our perception of the world that we easily accept a monochromatic representation (such as films, photographs, sketches and etchings, in varying tones of grey) in the visual arts without any hesitation, even though monochromatic representation represents a world that does not exist (Dondis 1973). This monochromatic visual world is readily accepted only because of the vital role that tonal values play in our perceptions of our environment. Tone is one of the best tools for indicating and expressing dimension. It is also an integral part of our survival, which is only second to the vertical-horizontal reference as to the visual clues of our relationship to our surroundings (Dondis 1973). Tones allow us to see sudden movement, depth, distance, and other environmental references (Dondis 1973:50).

### **2.3.2 Form**

Form is accordingly divided into three parts, namely dots, lines and shapes (Lester 1995). The dot is the simplest, smallest piece of visual communication (Lester 1995). The dot as a visual element can also serve as a reference point or a marker of space, whether it exists naturally or is man-made (Dondis 1973). When utilising two dots located apart from one another as key reference points, the dots can serve as a measuring tool in the environment or in the development of any kind of visual plan (Lester 1995 and Dondis 1973). When more complex measurements are made in a visual plan, more dots are employed. A series of dots also have a unique ability to lead the eye, and when the dots are closer to each other this ability for leading the eye is intensified. When seen, dots connect and therefore are capable of leading the eye. In great profusion and juxtaposed, dots create the illusion of tone or colour, which is the mechanical means for reproducing continuous tone (Dondis 1973). Dots figure prominently in the halftone process that allows for the printing of photographs (Lester 1995:38) and as a result an image is actually constructed from a collection of dots.

The line can be defined as a dot in motion, or as the history of a dot's movement, considering that when continuous marks or lines are made by placing a marker point on a surface and moving it along, thereby leaving the formed mark as a record (Dondis 1973). The line is also a fluid articulator of form and by its mere nature has immense energy which makes it a restless, probing non-static visual element of sketching (Dondis 1973). Lester (1995) similarly describe, lines whether they are straight, curved or in various combinations, to contain a form of energy that almost always evokes emotion in a viewer. Therefore, line can take many forms and express many different emotions. Dondis (1973:44) says that the visual element of line is mostly used to express the juxtaposition of two tones. Line is utilised most often to describe juxtaposition, and in this, it is an artificial device. Line has a looseness and freedom of experimentation, but it is decisive; it has direction and purpose; it is going somewhere and it is doing something definitive. Line,

according to Dondis (1973:43), can also be tight and technical; it serves as a prime element in diagrammatic plans for mechanical construction and architecture and many other highly measured or scaled visual representations.

There are three basic shapes: the circle, the square (parallelogram) and the equilateral triangle (Lester 1995 and Dondis 1973). These basic shapes allow for various combinations and permutations, both planar and dimensional. Each one of these shapes has its own unique character and characteristics and each one has its own meaning, whether it is through association, or some arbitrary attached meaning or our own psychological and physiological perceptions (Dondis 1973). Bonnici (1999:56) regards shapes as a step away from letterforms, a step of abstraction which can generate emotional shifts. Bonnici (1999:112) also indicates that with small variations of the placement of these elements, that emotional impact can be created and if need be, changed.

The circle is associated with endlessness, warmth and protection (Dondis 1973). A square is a four-sided figure with exactly equal right angles at each corner, and sides of exactly the same length. The square is also associated with the following: dullness, honesty, straightness and a workmanlike meaning (Lester 1995 and Dondis 1973). A circle is a continuously curved figure whose outline is at all points an equal distance from its centre point. Lester (1995:40) describes circles as endless rhythmic patterns of time, that symbolises eternity. And lastly, the equilateral triangle is a three-sided figure whose angles and sides are all equal. The triangle is associated with action, conflict and tension (Dondis 1973).

### **2.3.3 Depth**

Lester (1995) describes depth as a complex concept that includes eight factors (depth cues). Depth enables humans to perceive increased or decreased depth of an image. Lester (1995) lists some factors related to

depth, such as “space of the visual array, size relative to the frame, colour, lighting, texture gradients, interposition, time and perspective (the most complex of depth factors as it includes illusionary, geometrical and conceptual perspectives)”. Some of these concepts have been described under their primary visual cue.

Texture by nature is best appreciated with our sense of touch, but can also be appreciated and recognised by sight. Whether texture is appreciated by our sense of touch or sight, individually or by a combination of both, it is also possible for texture to have no tactile quality but only optical, like the lines of type, or crosshatched lines in a doodle, and where there is actual texture, the tactile and optical qualities coexist (Dondis 1973). Dondis (1973:56) makes the following comparison of sandpaper: what it looks like and what it feels like may have the same intellectual meaning, but not the same value. They are singular experiences which may or may not suggest each other under certain circumstances. Dondis (1973:55) points out that most of our textural experiences are optical and not tactile.

Space of the visual array refers to the frame in which the image is located, and the distance from the object determines the perception depth (Lester 2006). The scale or proportion refers to the relative size and measurement of objects. The size also aids in the creation of the perception of depth, when the viewer is aware of the actual size of the object (Lester 2006). Interposition is a technique where objects are placed in front of one another to create the illusion of depth. If similar objects were to be positioned side by side, the viewer would not be able to perceive a three-dimensional space and therefore would not be able to judge any depth (Lester 2006). Evelyn Hatcher maintains that time plays a significant role in certain cultures and can alter the way in which these cultures perceive depth (Lester 2006). Cultures that regard historical events as being of considerable importance have a tendency to place close objects on the same level as distant objects (Lester 2006).



As stated previously, perspective represents one of the more complex factors of depth. Evelyn Hatcher (in Lester 2006:44) identifies the following three forms of perspective: illusionary, geometrical and conceptual perspective. Illusionary perspectives are mainly achieved through the use of colour, size, lighting, interposition and linear perspective (Lester 2006). A prominent example of linear perspective is the way in which railway lines seem to converge at a certain area (vanishing point) in a distance (Lester 2006). It is this particular aspect of illusionary perspective that provides the three-dimensional space in paintings, pictures and photographs (Lester 2006). Geometric perspective places near objects/figures in the lower regions of an image, and objects that are further away in higher regions of the frame (Lester 2006). Conceptual perspective has more symbolic traits than the previous types of perspective and is accordingly divided into two types of perspective, namely multi-view and social (Lester 2006). Having multi-view perspective is the ability to see many different sides of an object at the same time (Lester 2006). Social perspective refers to the relationships between individual elements in a picture. Certain elements (people) assert more power if they are portrayed larger than the other elements that are less important. This effect can be achieved by size and the placement of the various elements when dominance of the one element is portrayed over another element (Lester 2006).

#### **2.3.4 Movement**

Lester (2006:46) indicates that there are four types of movement: real, apparent, graphic and implied. Real movement constitutes actual or unmediated movement which is not connected to a picture presented in print or in other forms of the media (Lester 1995). Apparent or illusionary movement deals specifically with motion pictures or still pictures that appear to move (Lester 2006). Graphic movement entails the way the viewer's eyes are directed to look at various objects of a picture. These eye movements or scans by the viewer are based on previous experiences or can be influenced by the placements of the various graphic elements (Lester 2006). Implied

movement, according to Lester (2006), is “the motion that the viewer perceives in a still, single image without any movement of object, image or eye”. This implied illusion of motion can be due to optical illusions or the directional forces of basic shapes. Direction is the force of movement that incorporates and reflects the character of the basic shapes. Every basic shape expresses three basic and meaningful visual directions, namely: circular, diagonal and perpendicular (Dondis 1973). Optical illusions create frenetic and pulsating effects, which are called visual vibrations. These vibrations are caused by using high contrast lines or complementary colour patterns that create the illusion of movement (Lester 2006). See Chapter 4, in connection with motion related to sequential art.

## **2.4 Visual perception**

Dondis (1973:39) points out that the basic visual elements that form the compositional source of visual messages rely on selective choices and combinations to form a structure of visual work, and that this structure force is what determines which visual elements are present and with what prominence. This particular interaction and influence of human perception on visual messages is partly based on the Gestalt principles (see Section 2.5).

Lohr (2003:13) focuses on three design principles for the creation of visuals for learning and performance. The principles are figure/ground, hierarchy and Gestalt, which, in Lohr's (2003) view, are based on human perception. Skaalid (1999) and Torrans (1999) regard the figure/ground principle to be part of the Gestalt principles. Although Lohr (2003:202) concedes that the figure/ground, hierarchy and Gestalt principles are intertwined and difficult to separate, she finally contends that Gestalt employs both figure/ground and hierarchy principles and that hierarchy is very similar to the Gestalt principle of continuity (Lohr 2003:239). For the purpose of this document the figure/ground and hierarchy will fall under the Gestalt theory, seeing that the principles are so closely connected.

## **2.5 Gestalt theory**

Berryman (1990:8) concludes that Gestalt visual principle allows for effective communication by means of analysing images and thus for evaluating the end effectiveness of this visual imagery. Berryman (1990) and Dondis (1973:39) points out that the Gestalt theory entails two factors, namely firstly, that separate parts of a visual image may be analysed and evaluated as a distinct, separate element, and secondly, that the whole image is greater and different from the total sum of its components. Noble and Bestley (2005) also describe Gestalt as the organisation of the whole that is more than sum of its parts.

Horn (1998:75) suggests that the spatial syntax of visual language largely depends on the Gestalt principles/laws. Both Horn (1998:75) and Lohr (2003:43) indicate that the Gestalt principles/laws aid in organising our visual perceptions. The fundamental discovery of the Gestalt is that the figure/ground phenomenon allows us to distinguish between foreground and background and that it aids us in our visual perception (Horn 1998 and Berryman 1990).

Lohr (2003:204) points out that McIntyre (1983) describes hierarchy as the act of creating a series of indicators that utilise contrast, alignment, proximity and various other Gestalt principles as devices to direct the eye towards certain information in a particular order. There are also three methods according to Lohr (2003) that aid in facilitating hierarchy, namely chunking (clustering information in related groups), providing entry points to instruction and using horizontal and vertical planes. Lohr (2003:215) states that Hartley (1985) and Misanchuk (1992) identified that the hierarchical principles are useful in designing of charts, tables and graphs. Six principles of Gestalt are briefly discussed below.

### **2.5.1 Principle of proximity**

This law states that when objects or shapes that are relative close to one

another they appear to form groups which belong together (Horn 1998, Torrains 1999 and Skaalid 1999).

### **2.5.2 Principle of closure**

The principle focuses on how the Gestalt theory seeks completeness when viewers tend to complete figures/shapes even when parts of the information are missing (Skaalid 1999, Torrains 1999). Skaalid (1999) continues by implying that our minds react to patterns that are familiar, even though we receive incomplete information. Skaalid (1999) mentions that it is speculated that this principle of closure is a survival instinct, a mechanism that allows us to complete the form of a predator even with incomplete information. Berryman (1990) concludes that closed shapes appear visually more stable than unclosed shapes, and that humans have a natural tendency to close gaps to complete unfinished forms. Lohr (2003:278) describes the principle as merely a mechanism for the mind to fill in gaps and further argues that even when we show only a part of an image, instead of the entire picture, that mind is likely to fill in the rest.

### **2.5.3 Principle of similarity**

This principle states that identical visual units or similar objects will appear to be grouped together or to be related to one another (Berryman 1990, Lohr 2003 and Torrains 1999). Berryman (1990) mentions that these similar objects are defined by their shape, size, colour and direction. Lohr (2003) further points out that the use of a specific font can also simplify and show similarity.

### **2.5.4 Principle of contiguity**

Torrains (1999) describes this law as a tendency by humans to continue shapes beyond their ending points. Lohr (2003:278) describes contiguity as the process of the mind that tries to follow a path or plane from where it started to beyond. A useful aspect of contiguity is that designers can control the sequence in which information must be followed or processed.

### **2.5.5 Principle of previous experience**

Lohr (2003) contends that previous experience has an influence on how people relate to new information. Lohr (2003:254) describes Pettersson's (1993) explanation that learners analyse and interpret new information partly based on their previous experience, emotions and prevailing situations. According to Lohr (2003), symbols and metaphors are widely used in instructions because of the power of the previous experience rule. However, she explains that even though pictures might have a universal appeal, in reality they are culturally specific. Isomorphic correspondence, according to Berryman (1990), deals with the relationship between the structural features of visual forms and their correspondent features of human behaviour. Berryman (1990) points out that a previous experience - both on a physical and psychological level - is recalled and triggered by a specific visual image. Chapter 4 elaborates more on anthropomorphic characters.

Lohr (2003:43) highlights the fact that Gestalt theory is based on the principle that the whole is greater than the sum of its parts and that Gestalt theory also supports the concept that a merger between text and visuals can produce a more effective learning strategy, than if the two were used independently (Lohr 2003). This aspect of Gestalt theory supports the use of visuals as memory aids or mnemonics that can enhance a person's recall ability (Lester 2006:60). Finally, Lohr (2003) points out that the Gestalt principles deal with how information comes together in a meaningful way and how it ultimately shapes our perception and our ability to make sense of various elements in a coherent fashion.

### **2.6 Conclusion**

Although there are numerous descriptions of the term *visual literacy*, the essence of this concept lies in a group of vision competencies that enables the viewer to interpret a visual message correctly and also offers the key ability of using visuals as a method of communication. As outlined in this

chapter, visual literacy skills require an understanding of the function and descriptions of the basic elements from which visuals are constructed. As explained in this chapter, the components of visual communication (basic graphic elements) are the “building blocks” of an image and the “construction” of an image does not only rely on the identification of these elements but also on the understanding of how they are placed together to form a coherent visual unit. This successful composition of a visual unit relies on an understanding of how the Gestalt principles function.

Chapter 4 clarifies that it is critical to understand what constitutes visual literacy, and that the acquisition of new visual literacy skills leads to a greater understanding of the persuasive power of visual messages, which in turn will culminate in higher visual intelligence. The concept of being visually literate has a direct bearing on the following chapter, which deals with the ability to combine visual and verbal elements successfully and methodically as a means of effective communication.

## CHAPTER 3

## VISUAL LANGUAGE AND VISUAL RHETORIC

**3.1 Introduction**

Dondis (1973:20) regards the development of composition as a vital step in the process of visual problem solving. He contends that in language, syntax signifies the logical arrangement of words in their proper form and order and that one merely has to learn and use them as defined by the rules of grammar. However, he points out that in the context of visual literacy, syntax can only entail the orderly arrangement of parts. This leaves the problem of composition and how it will affect the final outcome (Dondis 1973). Kress and Van Leeuwen (1996:3) ask: What is linguistic grammar? They accordingly answer that “grammar is an inventory of elements and rules underlying culture-specific verbal communication” (Kress and Van Leeuwen 1996:3).

Kress and Van Leeuwen (1996) further point out that visual grammar is the grammar of visual design. They propose that visual grammar must include forms ranging from oil paintings, comic strips and magazine layouts to scientific diagrams. Kress and Van Leeuwen (1996:3) regard visual grammar as that of contemporary visual design in Western culture and therefore that it consists of an inventory of elements and rules that inspire a culture-specific form of visual communication. Accordingly, Kress and Van Leeuwen (1996) maintain that visual language is not transparent and universally understood, but that it is culturally specific. Kress and Van Leeuwen (1996) restricted their research of visual objects specifically to Western cultures but maintain that this particular communication system has some form of history that has evolved and has been documented over that last five centuries. They do not see it as being restricted to specific nations *per se*, but believe it has spread globally wherever Western culture is the dominant culture. Kostelnick

(2003:215) states that visual language is loaded with rhetoric since designers arrange elements in particular circumstances to achieve a desired outcome. Various forms of visual language, from typefaces and illustrations to icons, can be organised to represent information that contains elements that can direct attention and influence attitudes. Visual rhetoric entails shaping visual language that can be utilised to embed information that ultimately influences or shapes a reader's interpretation in a specific situation. The process of embedding previous experience and observations of cultures (enculturation) leads to rhetorical efficiency (Kostelnick 2003:215). Whereas the previous chapter explored how and why visual literacy is important for understanding visuals, this chapter will focus on how the composition of those building blocks creates meaningful communication and on the fact that any form of communication is filled with smaller messages. The decoding of visual rhetoric contained in messages will lead to the successful utilisation of visual language.

### **3.2 Visual language**

According to Horn (1998), visual language can be defined as the tight integration of words, images and shapes into a single communication unit. Horn (1998) states that the use of words is an essential component of visual language. He also states that words give the conceptual shape to communication and deliver the capacity to name, define and classify elements, thus ultimately contributing to the scrutinising of abstractions. Horn (1998:7) claims that a visual can only be considered to be conventional art and states that it cannot be classified as a language if it is not used in conjunction with words and shapes. The Cassell Dictionary (1998:622) defines *language* as follows:

**language** (lang'gwij) *n.* **1** the communication of ideas by articulate sounds or words of agreed meaning. **2** the human faculty which permits the creation and use of such systems of communication. **3**



the vocabulary peculiar to a nation, tribe or people. **4** the vocabulary appropriate to a particular science, profession etc. **5** the phrases and manner of expression peculiar to an individual. **6** literary style. **7** the phraseology or wording (of a book, passage, speech etc.). **8** any formal or informal method of communicating information by symbols, gestures etc.

Horn (1998) also emphasises that there must be a tight integration of words, images and shapes, and not just a mere juxtaposition of the elements. He maintains that the integration must lead to a functional or unified whole. In conclusion, Horn (1998) defines visual language as the tightly integrated communication units which are composed of words, images and shapes which can be further subdivided into verbal (words) and visual (images and shapes) elements. These visual and verbal elements can then be further analysed in terms of their linguistic properties (semantics, syntax, and pragmatics) and also in spatial terms, namely how the elements are connected collectively according to the Gestalt principles (Horn 1998:20). Lohr (2003:4) also indicates that words are a powerful visual element and that, in combination with symbols, they form part of an overall visual message. Barry (1997:279) claims that visual language is to the point and much more easily processed than its verbal counterpart.

### **3.3 Visual language modalities**

#### **3.3.1 Visual code**

Visuals are generally considered to be a form of communication that is not verbal in nature (Lohr 2003:27). Lohr (2003:28) points out that Braden (1996) has identified the following five categories of visuals: 1) semiotics and film/video conventions; 2) signs, symbols and icons; 3) images and illustrations; 4) multi-images; 5) graphic representations. Graphic representations encompass various of the other categories, but according to Saunders (1994), graphics is defined as a prepared form of visual

communication that incorporates symbols (from pictographic to abstract), shapes, maps, graphs, diagrams, illustrations or rendered pictures (realistic to abstract), multi-images (presented simultaneously or sequentially) and photographs (still or moving). Lohr's (2003) description of visuals is identical to Saunders's (1994) definition of graphics. There is one exception: namely that typography (the art and science of letterform) is included. Typography is the art or process of presenting a word or letter in a particular fashion so as to form a pictorial message (Lohr 2003). This form of typography would fall in between Type II (Emphasised verbal frame) and Type III (Verbal frame with visual cues) of Wileman's (1993:19-26) visual/verbal continuum classification. (See section 3.3.3 and Fig. 3.1: An adaptation of Wileman's (1993) visual/verbal continuum structure). The visual code is comprised of images and shapes or the visual graphics as described by Saunders (1994) and mentioned previously.

### **3.3.2 Verbal code**

Words, which form the basis of the verbal code, rely on type as a signifier (Noble and Bestley 2005). According to Noble and Bestley (2005), type carries a certain quality and character with its intended audience, and this meaning that it carries is not only derived from the content of the written words themselves, but it is also communicated through the composition and the semiotic reading of type as a image. In the construction of a message these specific visual qualities of particular type styles (specific typeface, colour, size, weight and position) all add to the meaning to the overall message which in this particular respect allows text to have a visual connotation (Lohr 2003:28).

### **3.3.3 Degrees of visualisation**

Wileman (1993:18) points out that words, both spoken and written, play a key part in communication, especially when the message is communicated in a

visual format, which results in a complex relationship between words (verbal images) and pictures (visual images). Wileman (1993) calls this verbal/visual continuum the degrees of visualisation which focus on the various types of relationships between the visual and the verbal codes. Wileman's (1993) visual/verbal continuum guide is represented by seven different types of visuals. Wileman's (1993:19-26) visual/verbal continuum is explained below.

### **Type I (Pure verbal frame)**

Pure verbal elements consist of text only and contain no visual elements. The viewer must be verbally literate. None of the type or words is emphasised.

### **Type II (Emphasised verbal frame)**

Various emphasised (decorative or highlighted) verbal cues form part of the overall verbal presentation in this type. Emphasis is applied to capture the viewer's attention. Some of typographic emphasis techniques are the following: changing type size, changing typeface or key words, and using colour.

### **Type III (Verbal frame with visual cues)**

In this type, verbal presentations have visual cues (pictorial or graphic symbols) that closely relate to the meaning of the verbal statement. The viewer receives part of the message visually, and does not have to rely totally on the verbal statement.

### **Type IV (Balanced visual/verbal frame)**

Verbal and visual elements are balanced in this type. The information or message is relayed in a visual/verbal combination in which both aspects are equally important. The message can be understood on either its visual or its verbal merits (qualities).

### **Type V (Visual frame with visual cues)**

Type V entails visual presentations with verbal cues that closely relate to the

meaning of the image. The visualisation of the message carries the most weight, with the use of words only to help clarify the message. A major aspect of this type of message is that the viewer must be visually literate to interpret the visual presentation of the data.

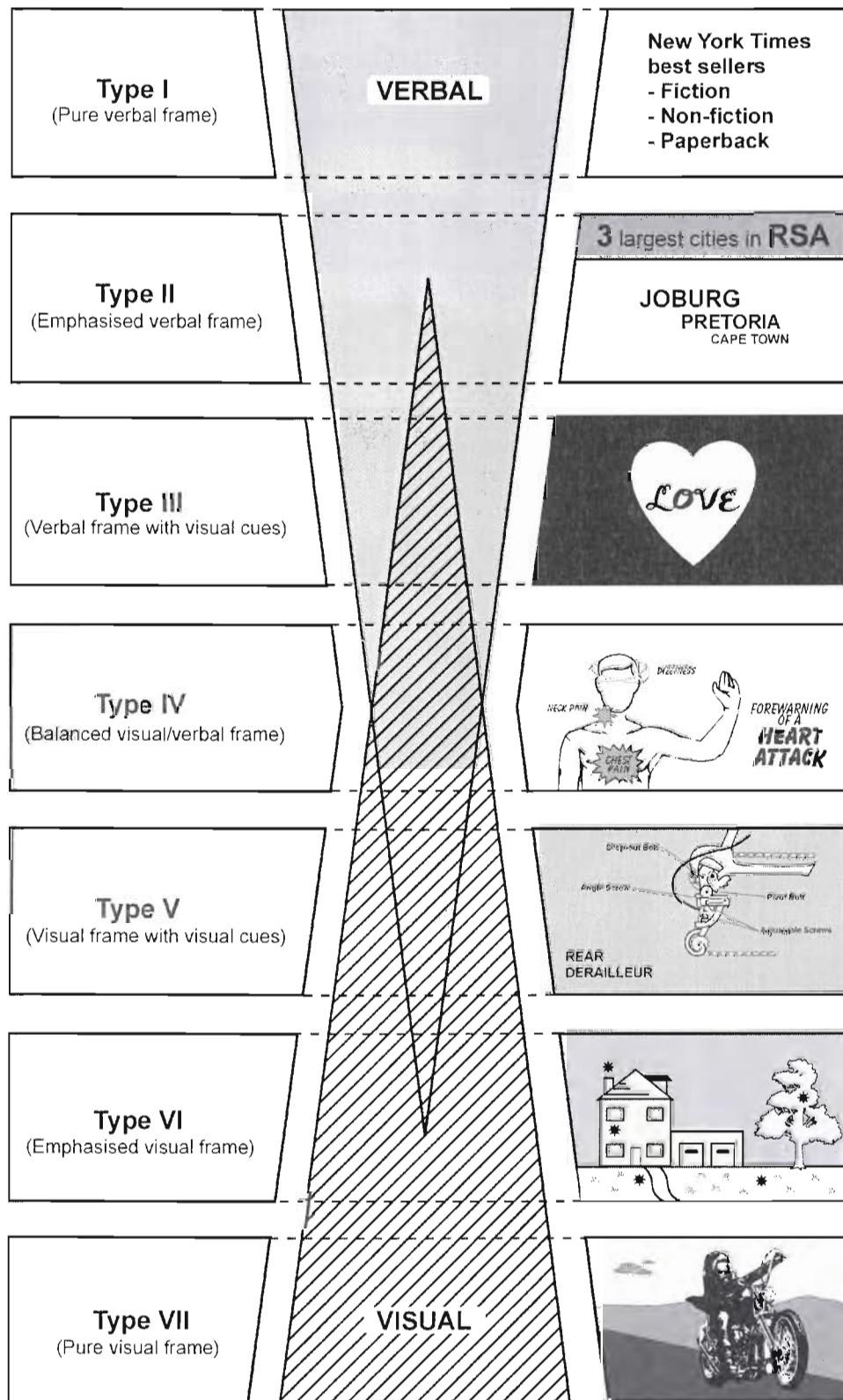
### **Type VI (Emphasised visual frame)**

In this type of presentation various emphasised visual elements form part of the message. The message contains no verbal elements. Emphasis is used to capture the viewer's attention. Visual (pictorial or graphic) emphasis techniques include the following: magnifying certain parts of an image, using colour, introducing textures around certain elements to highlight them, using arrows or symbols, or grouping certain elements within circles to isolate and to highlight these features within the image.

### **Type VII (Pure visual frame)**

This kind of presentation consists of pure visual elements only and contains no verbal elements (written characters or words).

The abovementioned types of visual/verbal classification were used in the test visual questionnaire to determine the level of the visual/verbal balance in the sequential art panels, as described in Chapter 5. (Also see Fig. 3.1: An adaptation of Wileman's (1993) visual/verbal continuum structure.)



**Fig. 3.1** Adaptation on Wileman's visual/verbal continuum

Source: Wileman (1993:19)

### **3.4 Language characteristics**

Messaris (1997:viii) points out that any mode of communication can be described in terms of either its semantic or its syntactic properties and that these properties can encompass various combinations. Lyons (1970) highlights Noam Chomsky's identification of the units that are present in any language in the sense that they can be defined independently, namely the phonological, syntactic and semantic units. Morris (1938) categorized the three features of language as syntactics, semantics and pragmatics. These features of language are discussed below.

#### **3.4.1 Syntactics**

Syntactical properties are concerned with the interrelationships that arise among the elements themselves when these individual units combine to form larger, meaningful units (Messaris 1997). Certain areas in the visual communication field (for instance those in which film directors are involved) have developed precise conventions for indicating spatial or temporal relationships among two or more images, or between the objects and the events portrayed in these images. Messaris (1997) further indicates that visual communication is largely characterised by a lack of explicit means for identifying ways in which images might be related to each other. This crucial element that visual communication lacks is the so-called propositional syntax. It is a distinctive characteristic of verbal language and it contains words and sentence structures that allow the user to be explicit about what kind of connections are being made (Messaris 1997). However, Horn (1998:73) proposes that syntax is present in visual language, although his definition of visual language includes the use of symbols and words in tight integration which provide it with a visual syntax in the way that patterns of arrangement of elements in a two-dimensional space can be analysed. According to Horn (1998:75), the proper arrangement of these elements relies on the perceptual principles of Gestalt on which the spatial syntax of visual language depends.

### 3.4.2 Semantics

The focus of semantic properties is on how the elements of a particular mode (such as images and words) are related to their meanings. The semantic properties of the various modes of communication, according to Messaris (1997), are of the utmost importance to the field of semiotics (the study of signs). Saint-Martin (1994:383) points out that Saussure's definition of a sign as a relation between a signifier and a signified is the basic axiom of semiotics. Noble and Bestley (2005:94) also refer to Ferdinand de Saussure's submission that language may be understood as a system of signs and that the basic unit of any language is a sign or phoneme. Ferdinand de Saussure states that a sign is made up of a signifier and a signified (Noble and Bestley 2005).

Saint-Martin (1994:383) cites Peirce's (1978) description of a sign as the relation between a representamen (a signifier), an object (a referent), and an interpretant (point to meaning). Saint-Martin (1994:375) points out that visual semiotics involve the study of visual representations which are part of a symbolic process, and not of all visible entities. According to Benveniste (1966:20, in Saint-Martin 1994:375), the term *symbolic function* refers to a process whereby reality is represented in the mind by signs, and the meaning of which is defined as a relation of something else to something else.

Noble and Bestley (2005) also regard semantics as a branch of linguistics that primarily deals with the study of meanings or the study of the relationship between signs and symbols and their respective meanings. Noble and Bestley (2005:92) highlight the fact that, in the discipline of semiotics, that denotation and connotation relate to the relationship between the signifier and the signified. Denotation is the primary or the literal meaning of a piece of communication, and this aspect of reading (decoding) and the act of producing (encoding) meaning within a message is fundamental to all forms of communication (Noble and Bestley 2005). Noble and Bestley (2005:93) also note that connotation is the range of secondary meanings within a particular format of communication, such as text, written, verbal or visual. The meaning and how we interpret it (read it) is not determined by the creator

but by the reader and therefore visuals may be considered as open texts, and that their connotations are based upon the interpretation of the reader on the basis of their class, gender and education. This is known as polysemy (Noble and Bestley 2005).

Horn (1998:93) portrays the semantic conventions of visual language as the integration of percepts and concepts and states that a cognitive process allows visual language to be an efficient tool for effective communication. Horn's (1998:95) theory entails that traditional communication relies on concepts which are handled in a verbal fashion, as well as on percepts that have been confined to separate boxes in which illustrations and diagrams appear. Horn (1998) further elaborates that percepts are generally thought of as impressions of objects received through our senses, and that concepts are considered to be mental projections which are occasionally related to percepts, while at other times they might be unrelated to percepts.

This cognitive ability, according to Horn (1998:97), allows for a process of making sense out of the tight integration of words, pictures and shapes as a form of semantic fusion. This form of semantic fusion relies on the tight integration of visual and verbal elements which Horn (1998:101) accordingly identified and classified as types of semantic integration. These elements are summarised in Table 3.1.

### **3.4.3 Pragmatics**

Horn (1998:54) describes pragmatics as a study of how a language is being applied in broad spectrum of the community and the different social functions that it performs. Horn (1998) mentions various other aspects, such as the way visual language attempts to make meaningful and effective communication, and the motivational factors or purpose of the communication agents. Cameron (2002) defines pragmatics as the practical aspects of how the structure and features of language may be used to achieve a variety of goals.



**Table 3.1** Types of semantic integration (Horn 1998)

Type	Definition
Substitution	Substitution constitutes the relationship between the verbal and visual elements, in which each element communicates related information.
Disambiguation	Disambiguation reflects the relationship between the verbal and visual elements in which each element communicates interconnected data to clarify the meaning and the explanation of each other.
Labelling	Labelling represents the relationship in which the verbal element describes the parts or wholes of the visually coded elements.
Example	The relationship is composed of visual and verbal elements which are used to denote a class of objects or ideas with its own specific instances.
Reinforcement	This relationship is between the verbal and visual elements in which the visual elements assist in the presentation of more abstract ideas.
Completion	The relationship between the verbal and visual elements is one where the verbal element initiates the idea and the visual elements sustain and complete the idea.
Chunk, cluster, and frame	The association between the visual and verbal elements is one where the visual elements provide a visual structure for the ideas to be communicated by the verbal elements. The Gestalt principle is usually used for this kind of semantic integration.

### 3.5 Visual semiotics

Saint-Martin (1994:375) describes visual semiotics as the study of visual representations, which is in part a symbolic process. Saint-Martin (1994:375) points out that the term *symbolic function*, according to Benveniste (1966:20), is a process whereby reality is represented in the mind by signs and says

that these signs have meanings. This is defined as a relation of something to something else. The basis of semiotics is that a sign exists and that this sign is generally something that stands for something else (Saraceni 2003:15). Noble and Bestley (2005:18) concur that semiotics, the study of signs and symbols, primarily deals with the relationship between the written/spoken signs and their referents in the physical world of ideas. The deconstruction of the marks, text and images can then be interpreted to determine their underlying meanings (Noble and Bestley 2005). Fontana (2003) contends that human communication largely depends on signs, whether the sign is in the form of written or spoken words, images or even gestures. These symbols, according to Fontana (2003:9), are conscious and explicit representations of reality, objects, actions and concepts that surround us in our environment.

Various schemes for classifying the relationship between signs and their meanings (or between the signifiers and the signified) have been developed, but the most widely recognised scheme is the triadic classification proposed by Charles Sander Peirce who also coined the term *semiotics* (Noble and Bestley 2005; Messaris 1997:viii). According to Peirce (in Zakia 2002:274), there are three ways to represent something. Peirce's triadic classification system is made up of the following: the icon, the index (or indices) and the symbol.

### **3.5.1 Icon**

An icon is a likeness that conveys the idea of the thing that it represents by means of imitation (Noble and Bestley 2005). Saraceni (2003) points out that an icon resembles what it means. Thus most pictures are icons, because they are generally similar to what they represent (Cobley and Jansz 2004:33). For instance, a picture of a dog stands for that dog because it resembles it (Saraceni 2003:15). Chandler (2002:40) however points out that Semioticians in general maintain that there are no pure icons seeing that an element of cultural convention always comes into play.

### **3.5.2 Index**

An index conveys information by the mere physical connection to things that it represents (Noble and Bestley 2005). An index indicates the presence of something else. For example, smoke is an index of fire. The smoke stands for fire, because it indicates its presence (Saraceni 2003:15). An index as a result “depends upon association by contiguity and not upon association by resemblance or upon intellectual operations” (Chandler 2002:41).

### **3.5.3 Symbol**

Symbols are general signs that have become associated with their meanings by their use and social convention (Abrams and Harpham 2005; Noble and Bestley 2005). This association between an image and what it represents is enhanced by the consistent use of these symbols (Honeywill 1999:88). Words are general examples of symbols. For example, the sequence of letters in ‘d-o-g’ stands for the idea of ‘dog’. This is not because it resembles a dog but because of its conventional meaning in the English language. In cases like this we talk about its arbitrary meaning (Saraceni 2003:15).

Messaris (1997:ix) describes Peirce’s third type of sign, namely the symbol as an arbitrary convention on the part of the users of the symbol, which has no similarity or physical causation to what it represents. Messaris (1997) points out that words are a typical example here, with the rare exception of onomatopoeia. Onomatopoeia is a figure of style in which we use words that we perceive to be similar to the sounds that they signify (Abrams and Harpham 2005:289). Fontana (2003) also points out that symbolism has another equally important though less explicit side that relates to our inner psychology and to our spiritual world, which is culturally specific.

### **3.6 Visual rhetoric**

Noble and Bestley (2005:20) describe rhetoric as the effective use of language with particular reference to written or spoken discourse (the body of verbal or written communication between two or more parties) that is

primarily used to persuade/influence various parties. Zakia (2002:284) also regards the role of rhetoric as the effective and persuasive utilisation of language to influence the recipients of a message. Landoni and Gibb (2000) describe visual rhetoric as the art of adding value to textual information by means of various graphic elements. Visual rhetoric, according to Kress and Van Leeuwen (2001), explores how visual images communicate in contrast to verbal or aural messages and how they examine the relationship between the two codes. Concerning the different theories of rhetoric Mitchell (1996:49) writes:

Theories of rhetoric routinely appeal to the model of word/image conjunctions to define the relation between argument and evidence, precept and example, verbum (word) and res (thing, substance). Effective rhetoric is characteristically defined as a two-pronged strategy of verbal/visual persuasion, showing while it tells, illustrating its claims with powerful examples, making the listener see and not merely hear the orator's point.

Zakia (2002:285) contends that "one should not think of pictures and words as being separate but rather as complementing one another in much the same manner as moving pictures and music complement each other. The ability to distinguish rhetorical devices is the first step in understanding how they function." Rhetorical codes can be divided into rhetorical figures, premises, and arguments (Eco 1982:37). Eco (1982:37) identifies visual rhetorical figures such as metaphors, metonymy, litotes, and amplification, and further indicates that visual rhetorical premises are iconographic semes (images or iconic signs) with emotional connotations attached to them. Eco (1982:38) provides the following example of a visual rhetorical premise: whereby "the image of a man walking into the distance along a never-ending tree-lined road" signifies 'loneliness'.

Lastly, visual arguments are defined as a successive series of linked frames that are infused with the capacity of argumentative exploration (Eco

1982:38). These complex visual arguments come across in film editing, whereby the contrast between sequential frames alludes to intricate connections. Eco (1982:38) provides the following example of a visual rhetorical argument: “[C]haracter X arrives at the scene of a crime and looks suspicious – he must either be the guilty party, or at least someone who is to gain by the murder.” Durandt (in Zakia 2002:284) identified that for each “semiotic operation of addition, subtraction, substitution and exchange”, there are five things you can do to alter a message in a particular direction. The “rhetorical matrix” of Durandt (Zakia 2002:284) or, as referred to by Burgin (1982), the “rhetorical interactions” may be applicable to any visual message. Whereas Eco divided rhetorical codes into figures, premises, and arguments, Durand refers only to rhetorical figures Burgin (1982:75). See Table 3.2 for the inventory of Durand’s visual “rhetorical interactions” or “rhetorical matrix” and Appendix H for the definitions of the literary terms.

Kennedy (1994:207) suggests that pictures can faithfully replicate an environment and simply show a scene, or that pictures may have a purpose and may induce a trope (figurative use) or a kind of metaphor as a means of rhetoric in pictures. Kennedy (1994) maintains that rhetoric involves an object being used in a non-literal fashion and that irony, the very opposite of the standard connotation, is intended. On the surface this suggests that the meaning of a picture is not fixed, and that any object can stand for anything. Kennedy (1994:210) however makes an important distinction between literal and non-literal communication:

Irony comments on a pre-existing state, self evidently, although it uses opposites. It can only be effective when there is in fact a standard meaning. The same holds true for all tropes: e.g., hyperbole can only be a distortion when there is a standard size to flatter. Thus, rhetoric’s success is evidence for two standards – one a standard of meaning, and second a standard set of types of tropes. The standard meaning allows a violation of the standard to be noticed as a distortion. The standard types of tropes allow the distortion to be interpreted as a particular kind of distortion, rather than simply a random error.

**Table 3.2** Inventory of Durand's rhetorical matrix (Burgin 1982:75 and Zakia 2002:285)

Relation between visual elements		Rhetorical operations			
		<b>A Addition</b>	<b>B Suppression</b>	<b>C Substitution</b>	<b>D Exchange</b>
<b>1.</b>	<b>Identity</b>	Repetition	Ellipses	Hyperbole	Inversion
<b>2.</b>	<b>Similarity:</b>				
<b>2.1.</b>	of form	Rhyme	N/A	Allusion	Hendiadys
<b>2.2.</b>	of content	Simile	Circumlocution	Metaphor	Homology
<b>3.</b>	<b>Difference</b>	Accumulation	Suspension	Metonymy	Asyndeton
<b>4.</b>	<b>Opposition:</b>				
<b>4.1</b>	of form	Zeugma	Dubitation	Periphrasis	Anacoluthon
<b>4.2</b>	of content	Antithesis	Reticence	Euphemism	Chiasmus
<b>5.</b>	<b>False homologies:</b>				
<b>5.1</b>	of ambiguity	Antanaclasis	Tautology	Pun	Antimetabole
<b>5.2</b>	of paradox	Paradox	Preterition	Anthiphrasis	Antilogy

Kennedy (1994:208) maintains that a full set of tropes may be utilised in pictures, for instance irony, understatement and contradictions. He refers specifically to the following tropes:

- Prolepsis: pictures can illustrate events that occur in the present and in the future in the same scene;
- Hendiadys: one by means of two (e.g. an inebriated person is shown as a multiple image);
- Hyperbole: the exaggeration or caricature which involves the distortion of a standard size;
- Oxymoron: the combining of oppositions;
- Personification: a technique frequently employed in cartoons and advertising (e.g. a hamburger which is smiling, the American president as an eagle);
- Synecdoche: pictures represent something incompletely. (As also referred to by Horn 1998:105.)

Kennedy (1994:210) concludes that the set of types of tropes is governed by dimensions of meaning, time, size and metaphors. Both Kennedy (1994) and Horn (1998) indicate that metaphors have the capacity to incorporate multiple meanings or that they have the ability to reinforce the main idea and are extensively used to imply comparisons. Kennedy (1994) specifically mentions the following metaphoric devices in pictures that illustrate motion: “[F]igures showing motion are often drawn in deliberately distorted poses, or with extra limbs, or with lines suggesting extra profiles left behind in the rush, or with ‘speed lines’ trailing behind the figure.”

Kennedy (1994) also refers to Rosenblum’s (1993) research which indicates that observers do not need not to have formal instructions in their use, and that speed, direction and type of motion in a specific occasion can be observed through their use. An added quality is that this specific form of a metaphoric device allows for the impression of subjective motion, while

leaving intact the perception that the picture is static. Horn (1998:106) claims that it is this particular utilisation of analogies that enable humans to think about complex or abstract ideas in terms of a set of more familiar experiences. With the assistance of mnemonic devices or memory aids these complex ideas can furthermore be utilised to help remember important information (Zakia 2002:104). Mnemonics or visual aids (*aide-mémoires*) consist of rhymes, acronyms and visual images that allow a person to generate associations with something familiar to improve memory recall and memory storage (Iddon and Williams 2003).

Authors such as Foss (1994) argue that rhetoric has taken a pictorial turn and that this move is prompted by conditions such as the frequency of visual symbols and the impact it has on modern cultures. Foss (1994) also indicates that focusing only on verbal discourse will merely lead to understanding a fraction of the symbols that affect human lives. According to Foss (1994), visual rhetoric is the use of visual symbols for the purpose of communicating. She identifies the following three characteristics that emerge when describing the objects of visual rhetoric: they must be symbolic; they must involve some form of human intervention, which includes careful choices about colour, form, medium and size; and finally, they must be offered to an audience with the sole intention of meaningful communication.

### **3.7 Conclusion**

As suggested earlier in this chapter, visual language can be defined as the tight integration of words, images and shapes into a single communication unit (Horn 1998). Authors such as Barry (1997:279) also point out that “visual language is more concise and more easily and quickly processed than verbal language”. The effective use or interpretation of visual language furthermore relies on visual rhetoric. The rhetorical content of these various forms of visual mediums contains complex visual influences that are able to augment the messages with fresh connotations. The use of rhetoric can enhance the



overall visual message. However, according to Kostelnick (2004:215), it should be adapted to a specific “audience, purpose and context”. The characteristics of visual language, in conjunction with visual rhetoric as described in this chapter, allow for a meaningful form of communication to be constructed and utilised.

## CHAPTER 4

### KEY CONCEPTS AND ELEMENTS IN SEQUENTIAL ART

#### 4.1 Introduction

The term 'sequential art', which was coined by Will Eisner (1985), refers primarily to comics (sometimes spelled comix). Saraceni (2003:3) points out that the form 'comix' refers to underground comics where the content is more experimental, and normally intended for adult readership. The term initially coined to remove the stigma that is associated with the terms 'comics' or 'comic book'. The French use the term *Bande Dessinée* ('designed bands'), which implies that not all comics are humorous (Eisner 1985:13). Comics according to the French can be scholarly, artistic and even educational in nature (Eisner 1985). Berger (1998:132) states that although the general public know sequential art as 'comics' or as 'funnies' these terms are misleading seeing that many comic strips are of a serious nature.

In *Understanding Comics*, McCloud (1993) defines sequential art (comics) as "juxtaposed pictorial and other images in deliberate sequence, intended to convey information and/or to produce an aesthetic response in the viewer". Comic books in general are pulpy papered, and a saddle-stapled mixture of art and story (White 2004), although the modern western-style comic book is printed on high quality paper and consists of 32 pages (Caputo 2003:38). For the purpose of this study the terms sequential art and comic books/comics will be used interchangeably (see Section 5.5, Chapter 5) and will not include the following forms: cartoons that are mainly composed of one panel (Saraceni 2003:5) and which do not have continuing characters or dialogues shown in balloons (Berger 1998:132). Berger (1998) also points out that not all cartoons are funny. Political cartoons are sometimes meant to be critical as well as humorous (Berger 1998). Saraceni (2003:5) points out

that a prerequisite for comics is the arrangement of panels in sequences and that they also employ both words and pictures. The text in comics is also structured into sequential units which are graphically separated from one another (Saraceni 2003). The terms 'visual rhetoric' and 'visual persuasion' are often used synonymously. Studies in visual persuasion typically deal with the relationship between images and text as a category of "analogical juxtaposition" whereby certain analogical visuals cannot function adequately without text (Messaris 1994). Key authors on sequential art and visual literacy who have explored the fundamentals of visual rhetorical codes include Varnum and Gibbons (2001) Burmark (2002), Carrier (2000) and McCloud (1993).

In *Visual Literacy*, Burmark (2002) indicates that words and pictures cannot be compared and that pictures represent information in far different ways than words. In *The Aesthetics of Comics*, Carrier (2000) also clearly demonstrates that sequential art is neither a purely visual nor a strictly verbal art form, but often represents a new, composite art form that seamlessly combines verbal and visual elements. In *Understanding Comics*, McCloud (1993) discusses the extent to which young adults feel comfortable with non-textual visual media, including video games and graphical icons as used in standard computer programs. According to McCloud (1993), comic books employ a highly cinematic approach to storytelling and utilise combinations of text and pictures to convey messages in a manner unique to sequential art settings. In *The Language of Comics: Word and Image*, Varnum and Gibbons (2001) conveys the same message by describing how there is commonly a dependence on images for instructions and recreation. In this context, i.e. that comics are one of the most widely read media forms of the twentieth century, it is important to ask how words and images make meaning when they are combined. According to Eisner (1985), the modern acceleration of graphic technology and the emergence of an era greatly dependent on visual communication makes sequential art a serious pedagogical concern. Saraceni (2003:13) also noted that that words and pictures exist side by side

not only in the sequential art form but also in other modern forms of media. The chapter will further analyse the individual components that forms an integral part of sequential art.

## **4.2 Applications of sequential art**

The role of sequential art is also split into two applications (Eisner 1985). The applications are instructional and entertaining by nature. Graphic novels and periodical comic books are generally devoted to entertainment, while the main function of instructional comics is to teach something specific, which can be done in the form of manuals or storyboards. Instructional comics can also be subdivided into the following two groups: “technical” and “attitudinal” (Eisner 1985:142). Eisner (1985) points out that technical comics “give instructions” and “procedures” with regard to devices that need to be assembled or repaired.

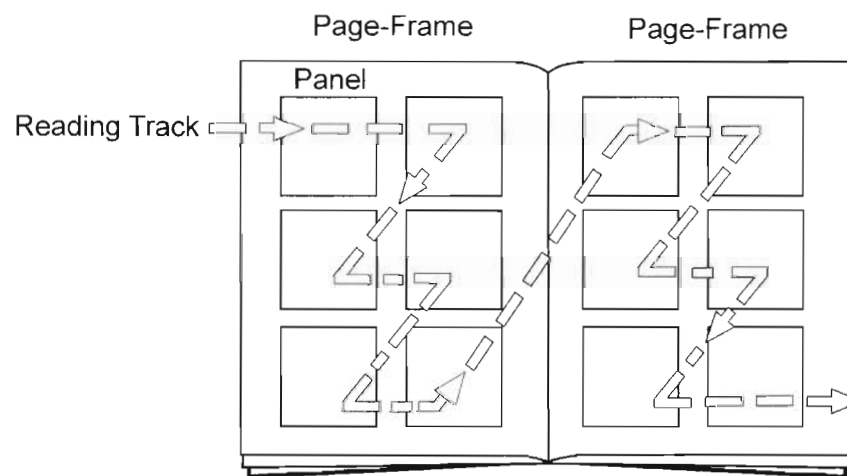
These instructions are normally given in a sequential manner and are illustrated and arranged from the reader’s perspective. The successful completion of a task is normally dependent on the subsequent adherence to the sequence of events that is contained in the document. An attitudinal comic however depends on exaggeration of the artwork to influence the reader’s perception and attitude towards a general task (Eisner 1985). The sequence of events in an attitudinal comic is both instructional and behavioural by nature and relies on analogies, humour and real-life situations to illustrate a certain message (Eisner 1985).

## **4.3 Components of sequential art**

### **4.3.1 The panel**

Eisner (1985:38) states that one of the fundamental functions of sequential art is to communicate ideas or stories by means of words and pictures that involve the movement of certain images through space. Eisner (1985) also

elaborates that to manage these events in the flow of the narrative; they must be broken up into sequential segments, which are known as the panels. These panels, according to Eisner (1985), express the passage of time, the framing of images moving through space and the containment of thoughts, ideas, action and locations. Eisner (1985) suggests that the panel attempts to deal with the broadest elements of dialogue: cognitive and perceptive as well as visual literacy. Eisner (1985) further mentions that the panel, which is also sometimes called a frame, is used in sequential art as a medium to secure control of the reader's attention and to dictate the sequence in which the reader will follow the narrative (see Figure 4.1).

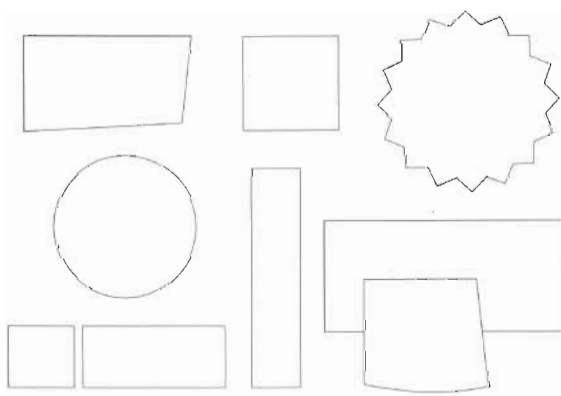


**Fig. 4.1** Panel sequence

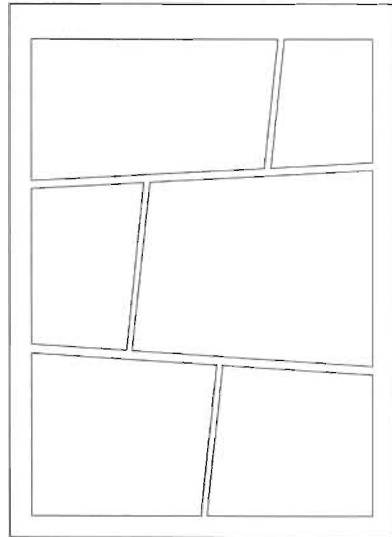
Source: Eisner (1985:41)

The most widely used format for a panel is that of a rectangular frame that contains pictures and speech balloons. Saraceni (2003) asserts that a panel normally depicts a single scene within a narrative comic and that each page of a comic book generally contains six panels which are normally separated by the gutter. McCloud (1993:99) suggests that the panel acts as a general indicator that time or space is being divided, and that these durations of time and dimension of that space are defined more by the contents than the panel itself. Eisner (1985) and McCloud (1993) both point out that panel shapes

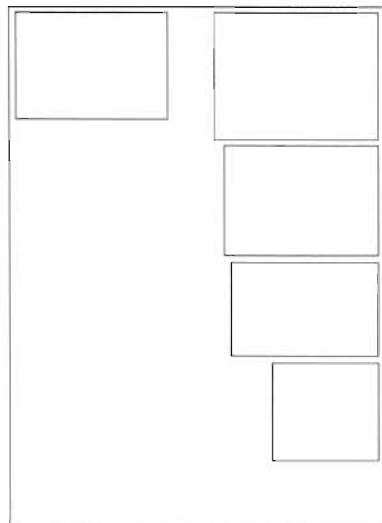
vary considerably, but McCloud argues that the panel shape does not affect the specific meaning of the panel and that it merely affects the reading experience. Eisner (1985:44), on the other hand, clearly demonstrates that in addition to the panel's primary function as a frame in which to place objects and actions, it can also serve part of the non-verbal language of sequential art. A rectangular panel with straight-edged borders contains actions that are set in the present tense unless the verbal portion of the narrative contradicts this. The wavy edged or scallop-shaped panel normally indicates a flashback scene and the jagged-edged panel lends itself towards the sound and emotion portrayed inside the panel. The scallop-shaped panel also expresses the idea of thought very similar to thought balloons. A non-framed panel usually indicates unlimited space and gives a timeless quality. It can normally be found on a super panel or page panel which itself would contain smaller individual panels on another plane to the overriding page panel (Eisner 1985; McCloud 1993). The panel shape or even the absence of one can form part of the story itself. As illustrated by Eisner (1985:40), the panel plays a far greater role than merely containing the pictures and speech balloons as mentioned by Saraceni (2003), but forms part of the narrative, lends emotion to the elements contained inside the panel, directs the viewpoint of the reader and acts as temporal map of the story. (See Fig. 4.2/4.3/4.4.)



**Fig. 4.2** Various panel shapes



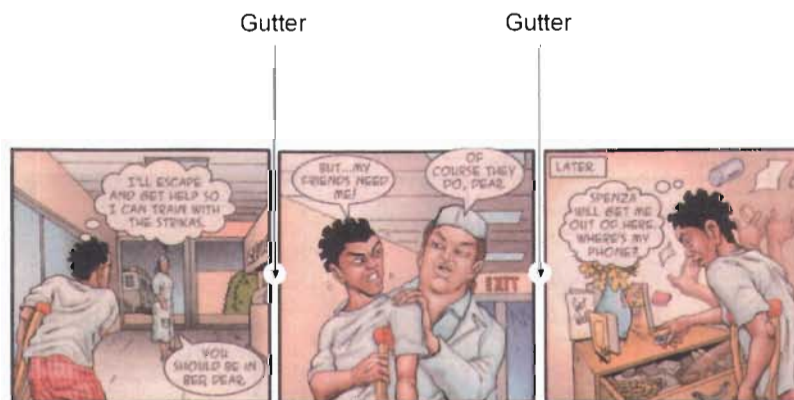
**Fig. 4.3** Six panel page  
Source: Supa Strikas



**Fig. 4.4** Super panel  
Source: The Madiba Legacy Series (2005:23)

### 4.3.2 The gutter

The blank space that separates one panel from another is called the gutter (see Fig. 4.5). Saraceni (2003:9) asserts that this open space contains everything that happens between the panels. In essence the reader has to construct the missing elements in order to reconstruct the flow of the story. This bridging of the gutter between panels is called closure, according to McCloud (1993). Closure is the phenomenon of observing the parts, but perceiving the whole. McCloud (1993) points out that the gutter is the area where the human imagination takes two separate images and transforms them into a single idea. Seeing that sequential art panels fracture both time and space and offer the reader a jagged staccato rhythm of unconnected moments, closure allows the reader to connect these moments, and mentally construct a continuous, unified reality. The actual width of the gutter between the panels is not of any great importance. Some authors of comic books prefer to draw adjacent panels to one another without any blank space between them. This presentation is referred to as 'gutterless'; it is the mere fact that conceptual separation between the panels remains as does the concept of the gutter that is important, according to Saraceni (2003).



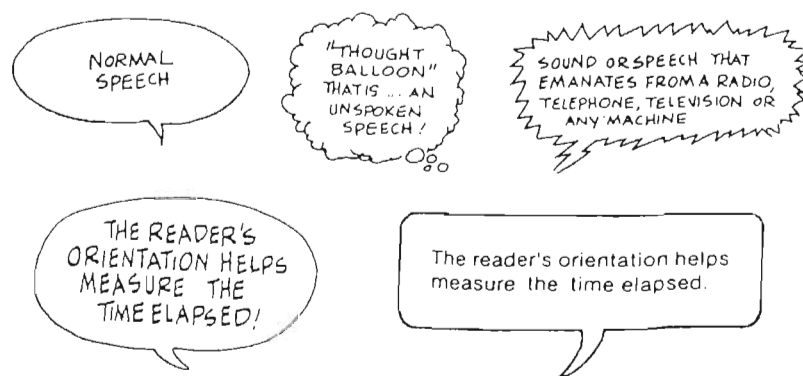
**Fig. 4.5** Gutters

Source: Supa Strikas



### 4.3.3 The balloon

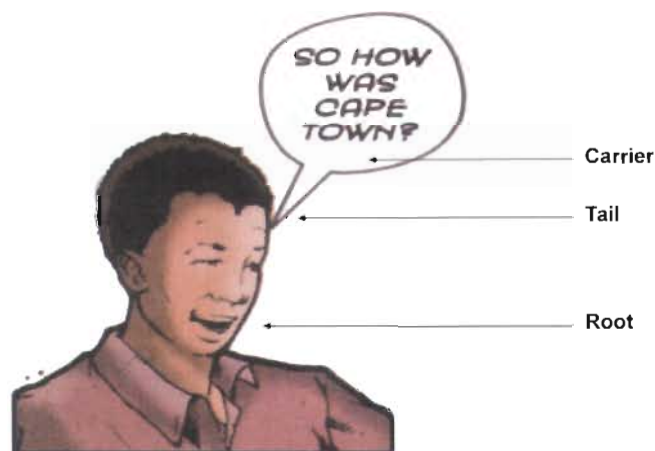
According to Saraceni (2003), the balloon is the space where most of the verbal text is contained. Balloons do not only report speech (in 'speech balloons') but can also contain the thoughts (in 'thought balloons') of a character. The use of speech balloons is also very important. Eisner (1985) emphasises that the arrangement of balloons which surround speech – their position in relation to each other, or to the action, or to their position with respect to the speaker – contribute to the measurement of time. The following characteristics of balloons are also of great importance: The words inside a balloon are almost always in the present tense, like dialogue in a novel (Carrier 2000:33). Balloons also require that they must be read in prescribed sequence in order to know who speaks first. Balloons are normally read from left to right and from top to bottom in western countries, similar to text (Eisner 1985). Another very important characteristic of balloons is their shape and the type of lettering that is used inside them. As sequential art progressed so the balloon has become more sophisticated. It is no longer just used to enclose text but took on another dimension along-side text. The balloon and type reflect the nature and emotion of the speech as well as the character of the sound. This heightened dimension serves to enhance the overall verbal code of sequential art (see Fig. 4.6).



**Fig. 4.6** Balloon shapes

Source: Eisner (1985:27)

The basic construction of a balloon is an oval or cloud-like shape, but many variations are possible. The shape normally plays a significant role in indicating the type and level of sound used by the characters (Saraceni 2003). Saraceni (2003:9) also noted that in case of adaptations of classic literature, the shape of the balloon is often square – this unusual shape is used to give the publication more respectability. The tail of the balloon indicates the character who is speaking (or thinking). The construction of the tail looks like a small pointed projection from the main oval or cloud-like shape, and can sometimes be illustrated by a simple line (Saraceni 2003). Saraceni also pointed out an important variation when the tail is formed by a series of small bubbles, which indicates that the balloon is a thought balloon (see Fig. 4.7).



**Fig. 4.7** The anatomy of the balloon

Source: The Madiba Legacy Series (2005:19)

#### **4.3.4 The caption**

The caption is another element that contains linguistic information. Unlike the balloon, the caption is always a separate entity from the panel and will not be positioned inside the panel, but rather positioned on top or at the bottom or on the left hand side of the panel (see Fig. 4.8). The text found inside the

caption normally represents the narrator's voice with the main function to add information to the dialogues contained in the adjacent panel. The caption in its simplest form can indicate a time or place and in other cases provide far more information than would be required by the reader to construct the flow between panels and fill the gaps represented by the gutter. In certain cases the caption plays a pivotal role in the narration of a story, since it sometimes contains most or all of the linguistic components of the text (Saraceni 2003:10).



**Fig. 4.8** Caption panel on top of the main panel

Source: Supa Strikas

#### **4.4 Words and pictures**

##### **4.4.1 The relationship between words and pictures**

According to Neil Cohn (2003:2), visual language can sometimes appear in isolation, but it occurs most often with a form of written language. This bimodal type of interaction between the two forms of languages is merely indicative of the fact that “humans use a variety of modes to communicate.” Cohn (2003) also notes that according to Robert Harvey (1994, 1996) and Mila Bongco (2000) that “this co-occurrence between visual and textual language” is one of the key features of “visual language’s capacity for meaning making”. Carrier (2000) suggests that these binary opposites (words

and pictures) are unified in sequential art since every visual and verbal element contributes to tell one story. This dualism is illustrated in sequential art by the synthesising of these separate elements. It is Eisner's (1985) view that the format of sequential art books presents a *montage* of both words and pictures and thus requires the reader to exercise both visual and verbal interpretive skills. For Eisner (1985) the knowledge of literature (grammar, plot, syntax) and the regiments of art (perspective and symmetry) are superimposed on one another. The end result is that reading this art form combines the act of aesthetic perception and that of intellectual pursuit. Eisner (1985:122) defines writing as the conception of an idea, the arrangement of image elements and the construction of the sequence of the narration and the composing of the dialogue.

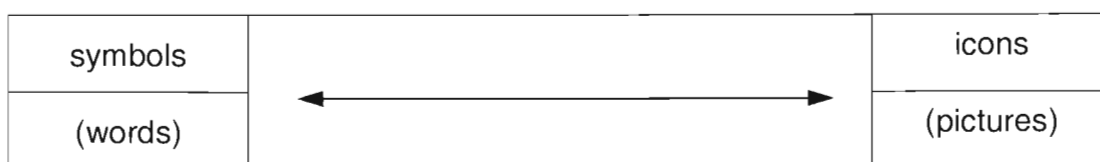
Saraceni (2003:13) points out that there are two kinds of relationships that exist between words and pictures, namely a blend and collaboration. The blend between words and pictures occurs when words are printed or written, and in order to read them you also have to look at them (Saraceni 2003:14). Saraceni also notes that besides being a verbal entity a word can also function as a visual entity on paper. This means that we understand the meaning of words, but the meaning is also dependent on the way that it is visually represented. Pictures, on the other hand, can mean something fairly precisely across a number of different cultures. For instance, in Figure 4.9 a person immediately associates the meaning of the symbol similar to the way you would associate the same thing with the actual words (Saraceni 2003).



**Fig. 4.9** Symbol (gents/ladies)

Source: Saraceni (2003:14)

This reading of a pictures-words combination requires a special kind of discipline, namely that of *semiotics*, as described in Chapter 3. Semiotics, as mentioned earlier, is the study of human and non-human communication which has at its core the study of signs. There are three main types of signs, namely icons, indexes and symbols (Saraceni 2003:15). For Saraceni the use of semiotics plays a vital role in establishing how pictures and words blend. According to Saraceni's (2003) description of the blend of words and pictures, we can clearly see that pictures tend to be iconic and words tend to be symbolic. The following diagram (see Fig. 4.10) represents the opposition between words and pictures and mainly focuses on icons and symbols (cf. Saraceni 2003:15).



**Fig. 4.10** Symbol/icon scale

Source: Saraceni (2003:15)

Although the diagram demonstrates that symbols and icons are on opposite sides, it is not necessarily a clear-cut difference. Many signs can be placed between the symbol and icon scale instead of merely being an iconic or symbolic sign. Similarly, the relationship between the ways a word is portrayed and its meaning can be very sophisticated. Figure 4.11 works on two levels at the same time, namely first as a word and then as a picture (Saraceni 2003). The visual/verbal aspects support each other in conveying the pure meaning of the cartoon. Saraceni (2003) also proposes that if the word 'democracy' was merely typed, and the system of pipes did not form the letters '**d-e-m-o-c-r-a-c-y**' it would not have the same effect. This is a clear example of how words can be used and perceived as images.



**Fig. 4.11** Democracy

Source: Peter Schrank (*The Economist*) in Saraceni (2003:19)

Figure 4.11 demonstrates how this word/picture would fall somewhere in the middle of the symbol/icon scale (Saraceni 2003). The visual aspects of words in comics are of great importance. Eisner (1985:10) also points out that certain text can be read as an image. Eisner (1985) asserts that if type has been treated in a graphic style, and is in the service of the story, it functions as an extension of the imagery, and in that context it will also provide the mood, a narrative bridge, and the implication of sound. For instance, bold type is used to emphasise certain words or to indicate their loudness by enlarging them. This is especially useful when indicating sounds or their expressive nature in the context of the story (see Fig. 4.12).



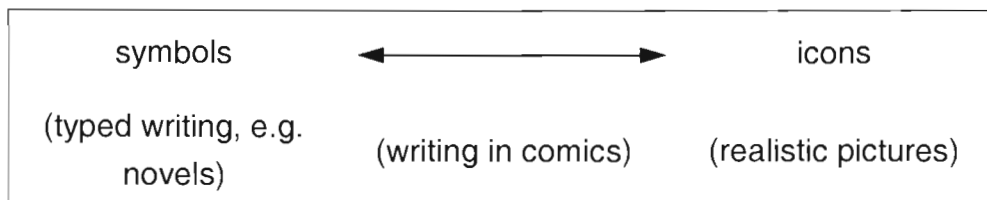
**Fig. 4.12** Expressive type

Source: Supa Strikas

The graphical value of letters in comics can be exploited, because they are normally handwritten and not typed. Handwritten words can convey emotions, or set the mood with their expressive style because a handwritten text is more closely related with the characters than what a mechanical typeface would be. The irregularities that human handwriting represents more closely resemble the irregular patterns (varying tones and loudness of voice) of spoken language (Saraceni 2003:21). Figure 4.13 clearly demonstrates two balloons with the handwritten balloon on the left and the mechanical type of balloon on the right. The balloon on the left seems far more natural and evokes a more natural emotional response (Saraceni 2003).



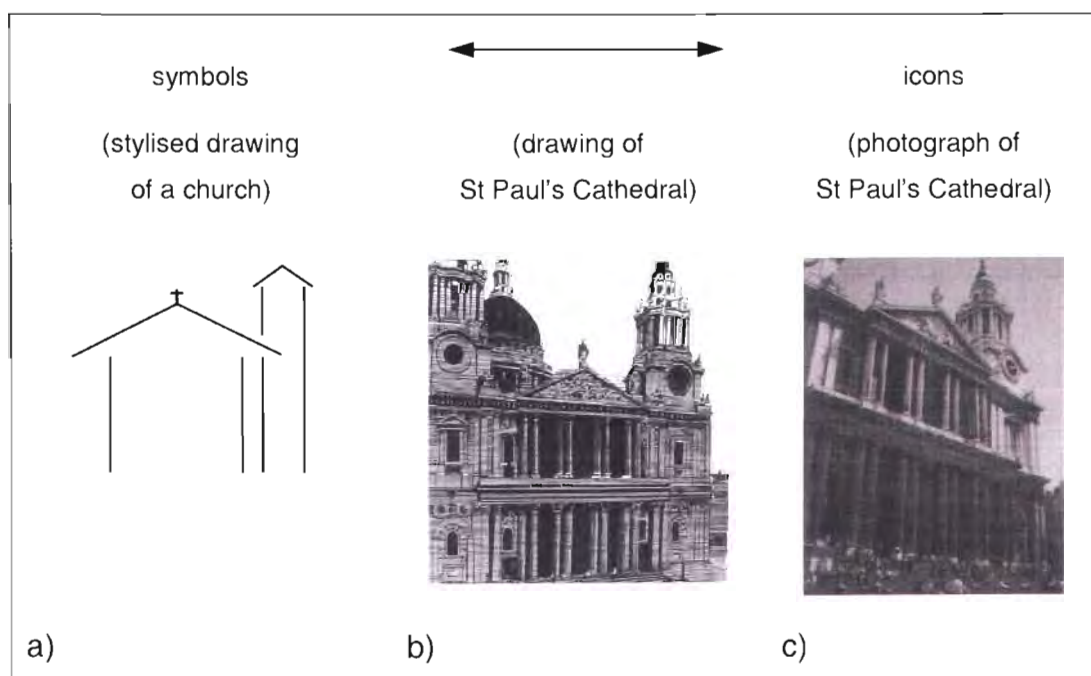
**Fig. 4.13** Handwritten and mechanical type  
Source: Saraceni (2003:21)



**Fig. 4.14** Symbol/icon scale of type in comics  
Source: Saraceni (2003:22)

According to the symbol/icon scale (Fig. 4.14) the writing found in sequential art can vary because it is often a blend of symbolic and iconic characters. Words in sequential art can be read and viewed and because of this their meanings are derived from their verbal value as well as their visual aspect. Pictures have so far been defined as iconic entities, for most pictures generally resemble what they depict. But pictures can also be symbolic and

also fall somewhere in the middle of the symbol/icon scale (Saraceni 2003). In the following example Saraceni (2003) demonstrates the theory of pictures falling somewhere in the middle of the symbol/icon scale. Realistic pictures like photographs are easily associated with the subjects that they represent, considering that the resemblance is fairly high. This is however not the case when pictures become stylised and less realistic. The ability to recognise the subject matter relies more on shared conventions than on the capacity for recognising the actual resemblance. Figure 4.15.c is a photograph of St Paul's Cathedral in London and Figure 4.15.b is a black and white stylised drawing of the same cathedral. Even if it is fairly realistic it relies on certain conventional devices to render the shaded parts of the image and eventually relies more on shared convention for the recognition of the subject than on actual resemblance. According to Saraceni (2003), Figure 4.15.a. would still be recognised as a church, but the image is constructed of 10 straight lines, and it is largely due to convention that we can identify a roof, two walls, a tower and a cross.



**Fig. 4.15** Symbol/icon scale of pictures in comics

Source: Saraceni (2003:23-24)



Pictures, like words, can also be characterised by a blend of symbolic and iconic features. This blend is a particularly prominent element in sequential art (Saraceni 2003). Pictures in comics are generally stylised and for this reason the stylisation places the pictorial elements closer to the symbol end of the scale and therefore closer to linguistic elements (Saraceni 2003:25). In comics, repetitive images and recognisable symbols are used frequently, and these elements form a part of a pictorial vocabulary. Facial expressions in comic books demonstrate this special vocabulary. In Figure 4.16 numerous different facial expressions can be seen. The key elements in the facial expressions are the mouth and eyebrows, which are represented by a simple straight or curved line. These lines all have a symbolic value, and as they are repeated in comic books, they convey a similar meaning much in the way words do. In cases like these we look at pictures but to a certain degree we also read them (Saraceni 2003).



**Fig. 4.16** Facial expressions

Source: Supa Strikas

Certain pictures in comic books can be even more symbolic than the facial expressions. Numerous symbols are commonly used in comic books to express a specific mental state (Saraceni 2003:25).

The following symbols as described by Saraceni (2003:26) is to be seen in Figure 4.17:

- Small stars represent pain.
- Wavy lines over character's head represent anger or frustration.
- Bubbles represent drunkenness or confusion.
- Drops of perspiration represent great surprise or anxiety.

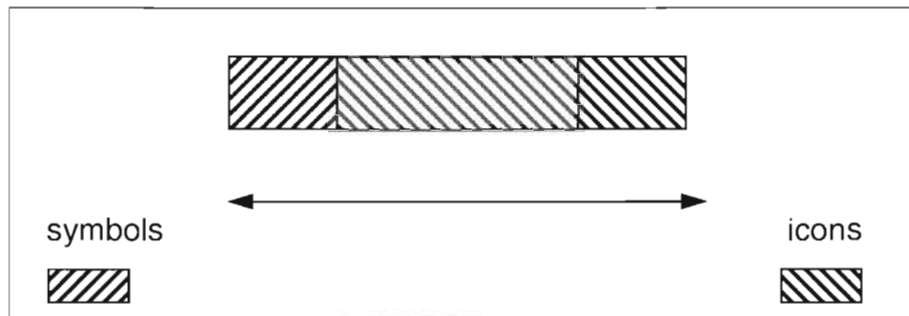


**Fig. 4.17** Symbol conventions

Source: Saraceni (2003:26)

Pictures, like words, can be characterised by a blend of symbolic and iconic features, and when certain areas covered by words and pictures are placed on the symbol/icon scale (Fig. 4.18) at the same time, they often overlap. This blend between words and pictures refers to the instances where both the visual and verbal codes are merged into the same sign, which is both symbolic and iconic at the same time. This blend between words and pictures, according to Saraceni (2003), forms the vocabulary of the language of comics. It is also a major feature of this art form. The collaboration that occurs between words and pictures in sequential art does not merely mirror the two elements. The words and pictures also interact on various levels, with each of the two contributing to its own share for the interpretation of the narrative. Pictures can illustrate the text of the narrative and aid in its understanding. The verbal code of comics can often describe situations or be used to tell fairly simple stories, while the visual code will go beneath the

surface and elaborate on the verbal code, and provide fundamental elements that would be required by the reader for a complete interpretation of the narrative.










**Fig. 4.18** Symbol/icon scale of images in comics

Source: Saraceni (2003:27)

This collaboration between the visual and the verbal represents the grammar of this art form, but unlike the blend, this collaboration between the two refers to cases where the two remain distinct entities from one another, while through collaboration convey the same meaning. This form of collaboration has the end result that it conveys significantly more information than it would if either was done in isolation. As demonstrated by Saraceni (2003:33), the relationship between words and pictures in comics can be divided into two categories, namely a blend and collaboration. In the case of the blend, words are used and perceived as images and then of course how certain pictures convey their meaning in a similar fashion to words. Finally, in collaboration words and pictures are distinct entities, but they interact with one another in an inseparable cooperation to convey meaning.

McCloud (1993:152) also indicates that where interchangeable words and images are combined, the author can construct a range of connected ideas. This combination can virtually be unlimited, but according to McCloud (1993:152) the word/image relationship can be divided into seven distinct categories and not just to two, as stated by Saraceni (2003:13). (Description and images from McCloud (1993:153-155.)

**Table 4.1** Word/image relationship (McCloud 1993:153-155)

<b>Categories of word/image relationship</b>	
<p><b>1. Word-specific combinations</b></p> <p>In word-specific combinations pictures illustrate but do not significantly add to the overall meaning derived from the text.</p>	
<p><b>2. Picture-specific combinations</b></p> <p>In picture-specific combinations words merely act as a soundtrack to a visually told sequence.</p>	
<p><b>3. Duo-specific combinations</b></p> <p>In duo-specific combinations panels “both words and pictures essentially send the same message”.</p>	
<p><b>4. Additive combinations</b></p> <p>In additive combinations the image amplifies or elaborates on the words. It can also function the other way around.</p>	
<p><b>5. Parallel combinations</b></p> <p>In parallel combinations words and pictures follow different paths, without intersecting.</p>	
<p><b>6. Montages</b></p> <p>In montages “words are treated as integral parts of the picture”.</p>	
<p><b>7. Interdependent</b></p> <p>Images and words go “hand in hand to convey an idea that neither could convey alone”.</p>	

#### 4.5 Sequential organisation of panels

Saraceni (2003) points out that to comprehend the structure of comics fully, a person must first think about how language (text) is constructed. When humans communicate they do not just use isolated sentences, but they use larger structures of language (texts). However, it very seldom happens, but is not totally improbable, to read or hear individual sentences by themselves. Normally we make sense of each sentence based on its predecessor, and on the successors. Every sentence carries with it information, and that particular information is vital to fully comprehend the sentence that follows. Reading a portion of text may only make sense when the following text is read and when all of the text is considered as a whole. Saraceni (2003:36) refers to this as “textual content”, and points out that this refers to the language that surrounds a portion of text. “Extra-textual context” refers to the knowledge of the world that a particular person may rely on to understand isolated sentences (Saraceni 2003:36). Isolated sentences exist but are exceptions rather than the norm and are used in context for signs such as ‘Beware of the dog’ and ‘No smoking’.

The structure of comics is very similar to that of language (Saraceni 2003). Comics’ texts are formed of strings of panels, in a similar fashion to language texts, which are formed of strings of sentences. The various panels of a comic are connected to one another by the concept of cohesion, which is derived from the Latin *cohaesus*, which means ‘cling together’. Saraceni (2003) elaborates that cohesion is the aspect of text analysis that is mainly concerned with the manner in which sentences are connected to one another. Cohesion does not only apply to language texts, but to texts in general, which includes comics. This particular form of cohesion that appears in the linking of more than one panel is in the repetition of common elements in the panels. These elements can be the same characters, objects, buildings, backgrounds or even small detail. This repetition of elements does not only occur between two panels, but can appear over several panels (Saraceni 2003). Each panel conveys some particular information, and part

of that information is repeated in the next panel, which in turn will share some of that information with the subsequent panel. This repetition of information produces a linkage of several sequential panels because these panels share a chain of information. Thus each panel will have information repeated from previous panels however these panels will also simultaneously be introduced to new additional information. The information that is repeated is called "given information", and the newly introduced information is called "new information" (Saraceni 2003:38). The given information prevents the reader from being displaced, while the new information carries the narrative forward.

Repetition does not only occur in adjacent panels, but can also link panels that are several pages from each other (Saraceni 2003). The main attribute of repetition is that it allows the reader to perceive connections across the whole length of text. This linking force of repetition allows the authors of comics to have several strings of panels that might appear disconnected only to be connected to other panels found somewhere else in the text. Saraceni (2003) points out that even in the absence of explicit links most readers will try to find possible ways in which a series of panels or sentences makes sense as long as such a series is presented to them as text. This perception of a series of panels or sentences as unified text by the reader is called coherence.

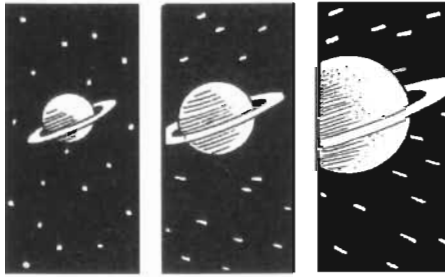
According to Saraceni (2003), the main difference between cohesion and coherence is that cohesion is largely based on repetition while coherence is based on the two processes that will now be explained. Firstly, coherence is based on the reader's ability to recognise elements belonging to the same semantic field (area of meaning). They are mental representations that are subjective rather than objective. This is an important factor for the author to consider seeing that the readers of the comics will come from different cultural backgrounds, and they will have different viewpoints and knowledge of the world, which will in turn influence the way that the reader perceives the comic book. Secondly, coherence is dependent on inference, which is the capacity of the reader to make sense of incomplete information.

Inference is the ability of the reader to infer the missing pieces or to reconstruct a full story where there are missing pieces, interruptions, gutters or white space, in which some information is left out. Gutters are almost present on every page of a comic book, which implies that there are almost always gaps to be filled by the reader. Gutters can represent a gap in time and space, or even both. This is an important factor to consider in comics, seeing that what is not told is just as important as what is told, and what is hidden is just as important as what is shown. This makes the gutter an essential part of the narrative because it contains all that is missing, which requires the reader to infer in order to construct a complete story (McCloud 1993). In comic texts, cohesion and coherence have their own well-defined spaces, the former inside the panels and the latter in the gutter (Saraceni 2003).

#### **4.5.1 The panel-to-panel transitions**

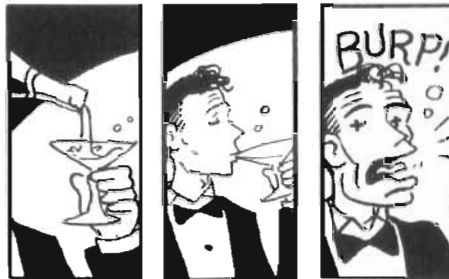
McCloud (1993) categorised panel transitions, based on the shift of change between the contents within each pair of juxtaposed images. This is similar to Saraceni's (2003) categorisation, where cohesion plays an important role inside of the panels with the main focus being on the repetition of elements found inside the panels. McCloud (1993:70-72) identified six types of "panel-to-panel" transitions: 1. Moment-to-moment, 2. Action-to-action, 3. Subject-to-subject, 4. Scene-to-scene, 5. Aspect-to-aspect, 6. Non-sequitur.

Moment-to-moment transition (Fig. 4.19) features a short interval of time. Action-to-action transition (Fig. 4.20) features a single subject in a distinct progression of action. Subject-to-subject transition (Fig. 4.21) stays within a scene or idea. A certain degree of reader involvement is required for a meaningful transition to occur.



**Fig. 4.19** Moment-to-moment transition

Source: McCloud (1993:70)



**Fig. 4.20** Action-to-action transition

Source: McCloud (1993:70)



**Fig. 4.21** Subject-to-subject transition

Source: McCloud (1993:71)

A scene-to-scene transition (Fig. 4.22) relies a great deal on deductive reasoning, for the transition transports the narrative “across significant distances of time and space” (McCloud 1993:71). Aspect-to-aspect transition (Fig. 4.23) “bypasses time for the most part and sets a wandering eye on different aspects of a place, idea or mood” (McCloud 1993:72). The non-sequitur (Fig. 4.24) offers “no logical relationship between panels” at all.



These transitions may not make any 'sense' in a traditional manner, but a relationship of some sort will inevitably be developed. By creating a sequence with several images, a single, overriding identity is bestowed upon them, thereby forcing the viewer to consider them as a whole, a single entity.



**Fig. 4.22** Scene-to-scene transition

Source: McCloud (1993:71)



**Fig. 4.23** Aspect-to-aspect transition

Source: McCloud (1993:72)



**Fig. 4.24** Non-sequitur

Source: McCloud (1993:72)

## 4.6 Temporality

Eisner (1985:25) concludes that the phenomenon of duration and its experience, namely “time”, is a dimension which forms an integral part of sequential art. Eisner (1985:28) further states that in sequential art, the device that forms the fundamental part of the transmission of timing is the panel or frame. Eisner (1985:28) describes this phenomenon in the following manner:

Albert Einstein in his Special Theory (Relativity) states that time is not absolute but relative to the position of the observer. In essence the panel (or box) makes that postulate a reality for the comic book reader. The act of panelling or boxing the action not only defines its perimeters but establishes the position of the reader in relation to the scene and indicates the duration of the event. Indeed, it ‘tells’ time.

The framing of time into individual panels separates the scenes and acts as a punctuator, and once it is established or set in a sequential form, the panel becomes the criterion by which the reader shall judge this illusion of time (Eisner 1985:28). Both Horn (1998:135) and Eisner (1985) point out that the magnitude of time elapsed is not expressed by the panel *per se*, but by the imposition of the imagery within the panel itself. Eisner further points out that the speech balloons, which is another form of a containment device, is used primarily for the entrapment or the representation of speech and sound. Speech balloons, according to Eisner (1985), are also very useful in the delineation of time, but to a lesser degree. McCloud (1993:99) subsequently explores this phenomenon of time as set out by Eisner (1985). McCloud however focuses his attention more on the contents of the panel than on the panel itself. McCloud (1993) nonetheless concedes that the panel acts as a general indicator that time and space are being divided and that even though there are numerous panel shapes, the shape of the panel does not affect the specific ‘meaning’ of the panel, although it may influence and affect the

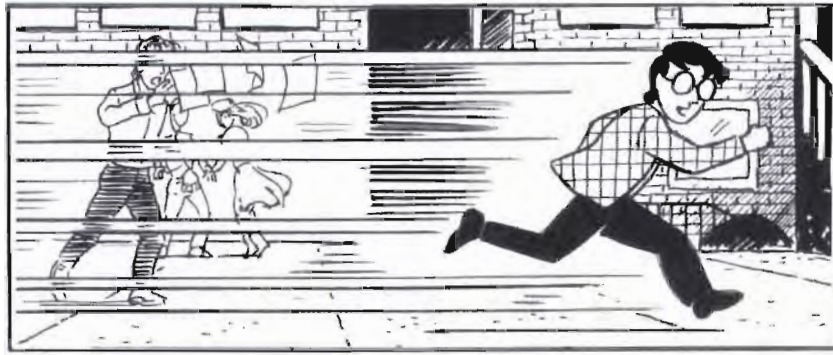
reading experience. McCloud (1993) points out that the phenomenon of time in comics generally leads to two topics, namely motion and sound. McCloud (1993:116) highlights the following aspects:

Sound breaks down into two subsets namely word balloons and sound affects. Both types of sounds (word balloons/sound affects) add to the duration of a panel, through the nature of sound itself and by the action and reaction to those sounds. Motion also breaks down into two subsets namely panel to panel motion and motion within the panels, of which there are several distinct styles.

McCloud (1993:107) reiterates that the motion that occurs in comics between panels is formed by the mental process that is called closure and says that this phenomenon normally occurs in type one and two of the panel-to-panel transitions. Horn (1998:115) suggests that time is understood in terms of metaphors for motion and space. Horn (1998) explores the idea, as set out by George Lakoff (1980), that the five senses of humans do not include any time detectors and that from an early age we construct an understanding of time metaphorically according to movements and changes that we notice. Lakoff's (1980) substantiation for this claim is mostly in linguistic terms, for time is often referred to as a moving object. Horn (1998) remarks that if our perception of time is understood via a metaphor of a moving object, that our understanding of time is based on that of motion.

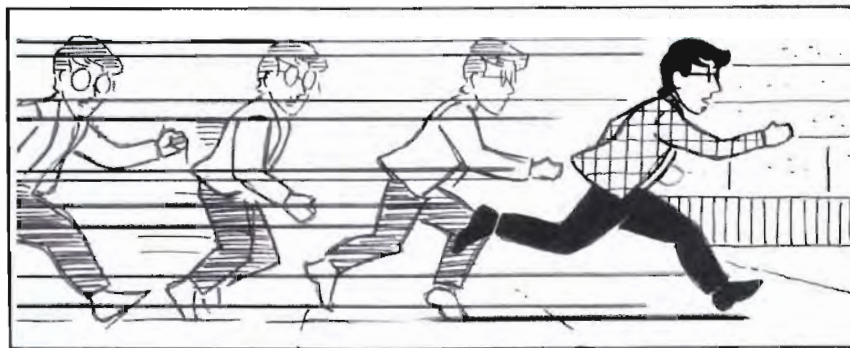
#### **4.6.1 Motion**

The second form of motion occurs within panels and has mainly been developed to show motion in a static medium through the use of lines (McCloud 1993). These motion lines or zip-ribbons have evolved from wild, messy lines to refined, stylised lines. McCloud (1993:110) points out two motion styles that occur within panels, namely motion lines and multiple images (see Figs. 4.25 and 4.26).



**Fig. 4.25** Motion lines

Source: McCloud (1993:112)



**Fig. 4.26** Multiple images

Source: McCloud (1993:112)

Multiple images (Fig. 4.26) provide an illusion of movement and speed in a static medium whereby an attempt is made to draw the reader more deeply into the action (McCloud 1993). This motion style was first employed in comics by Carmine Infantino, in the comic book *The Flash* in 1956 (Caputo 2002).

Gene Colan from Marvel Comics incorporated the photographic streaking effects during the sixties and seventies of the previous century. This effect was based primarily on his knowledge that when a camera's shutter speed is too slow to fully capture (freeze) a moving object, a blurring effects occurs (McCloud 1993). This is shown in Figure 4.27.



**Fig. 4.27** Photographic streaking

Source: McCloud (1993:112)

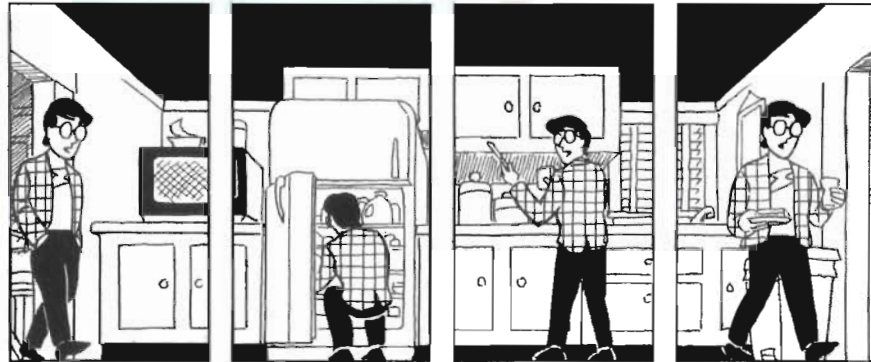
Subjective motion (Fig. 4.28) is extensively used in Japanese comics. This is a technique employed whereby the viewer is supposedly moving at the same speed as the moving object, thus causing the moving object to appear in focus while the background will be appear streaked. This effect was primarily employed to put the reader into the driver's seat and to involve him or her more effectively (McCloud 1993). Subjective motion or manga-style speed lines normally fill the panel from border to border. The speed lines sometimes have a secondary function as drama lines when they are used to convey a sense of anxiety or shock in a panel (Caputo 2002).



**Fig. 4.28** Subjective motion

Source: McCloud (1993:113)

Polyptych (Fig. 4.29) is a technique where a moving figure or figures are imposed over a continuous background (McCloud 1993).



**Fig. 4.29** Polyptych

Source: McCloud (1993:115)

Lester (2006:225) classifies motion as one of the conventions of sequential art, and says that motion lines are used to indicate that a movement of a character is taken place. Straight lines or puffs of smoke are among the more conventional elements that represent motion, according to Lester (2006). Lester (2006:225) also incorporates Mort Walker's descriptions of movement lines:

Hites refer to horizontal lines, vites refers to vertical lines, dites refer to diagonal movement, agitrons refer to wavering or repetitive lines, briffits refer to puffs of smoke or dirt, waftaroms refer to odours that float in a frame and plewds refer to perspiration that pop up and descend from a character's forehead that indicate nervousness.

Motion lines form part of the overall descriptive use to portray time and action in a static medium, ultimately enhancing the captivating power of sequential art (McCloud 1993).

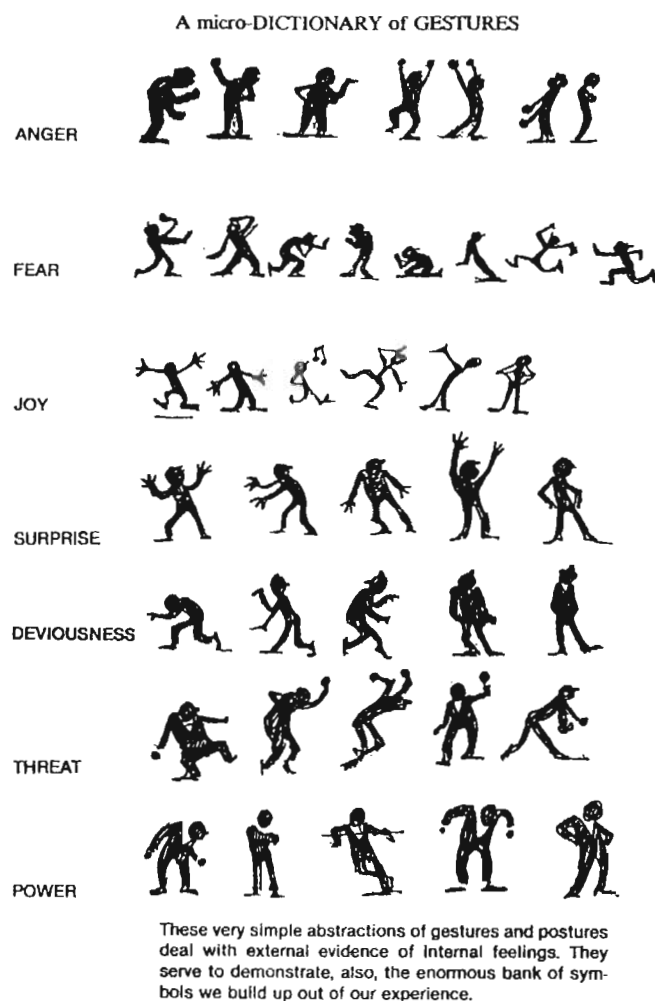
## 4.7 Characterisation

According to Alvarez (1996), the human figure is one of the most important parts of a comic book, considering that everything revolves around the characters. Chinn (2004:30) also points out that characterisation is crucial for the reader to understand what motivates the characters. Thus Alvarez (1996:21) highlights the fact that the correct proportions in the anatomy of a character play a crucial role in the characterisation and in the depiction of a character in a comic book. The size of the head of an average person is a form of a measurement tool to establish the correct height of a person (Guigar 2005; Alvarez 1996). According to Guigar (2005:66), a person in real life is about 7½ heads tall. Therefore super-heroes who are larger and more powerful than average humans in comic books must be drawn in such a way that it gives the impression of strength and power (Alvarez 1996). Consequently heroes tend to be drawn on an 8½ head scale (Guigar 2005).

Both Guigar (2005) and Alvarez (1996) state that the female proportions follow the same principles as their male counterparts but have smaller heads, which results in a somewhat shorter overall height. Body language forms an integral part of how the anatomy of a character works and is something that we all have inherited to inform people around us how we feel and in what mood we are in (Chinn 2004). Barbara Korte (1997) describes body language found in narrative literature as nonverbal communication that represents a form of semiotics that relies on the reader's competence to interpret interactions between characters. Chinn (2004:108) further suggests that these visual cues are subconscious. They normally override complex verbal language, and are therefore best suited in the portrayal of gestures that everyone can comprehend. Body language ranges from posture to facial expressions to hand gestures and even how the character is positioned in respect to his or her counterpart (Guigar 2005:102). Similarly Korte (1997:63) divides nonverbal communication into two classifications, namely modal and functional:

Modes of body language consist of Kinesics (facial expression, body movement); Haptics (touch) and Proxemics (spatial orientation). The function of the body language consists of emotional displays and externalizers, regulators and illustrators, and emblems.

Eisner (1985:102) points out that gestures are normally distinctive to a specific region or even a culture, and may also be subtle and could be confined to a narrow range of movements therein (see Fig. 4.30).



**Fig. 4.30** Gestures

Source: Eisner (1985:102)



#### **4.7.1 Anthropomorphic characters**

Anthropomorphism, according to Guigar (2005), occurs when human characteristics are bestowed on animals. Talking characters that are in animal form are also one of the most readily accepted flights of cartoon fantasy. This approach has resulted in the creation of famous characters such as Mickey Mouse, Bugs Bunny and Yogi Bear (Guigar 2005:145). Guigar (2005) points out that one of the reasons for the broad appeal of talking animal cartoons is that cartoonists may comment on the human condition without using actual human types, thereby avoiding overt references to topics such as race or religion. Most anthropomorphic characters reflect a combination of human and animal physiology traits (Guigar 2005). These traits allow for integrated anatomical structures with convenient alterations, such as the leg structure, human hands with opposable thumbs, shoulder joints, arm structure and various foot options (Guiger 2005).

Fontana (2003:131) suggests that even in modern societies certain animals are perceived to be omens of good or bad fortune. Certain traditions and cultures bestow certain symbolic values or beliefs on various animals, and these beliefs or values differ between different cultures (Fontana 2003). Fontana (2003) describes how a fox often symbolises cunning and deceit, but to Native Americans, the fox is accredited with instinctive wisdom. Fontana (2003) continues by pointing out that, according to oriental mythology, the fox is a powerful positive image and that it represents long life in Japan. Animals have various personality traits based on cultural or ancestral beliefs, mythology, or legends (Guigar 2005:155). An anthropomorphic character should only be utilised after careful consideration, seeing that these characters come with preconceived notions or assumptions on how these animals behave (Guigar 2005).

## 4.8 Conclusion

Horn (1998:134) mentions that sequential art conventions are increasing since in recent years it has been merged with diagrammatic, business, educational and various other conventions to enable effective communication. Horn (1998) illustrates this concept where speech balloons appear as a pop-element in computer interfaces, where they are used to explain the meaning of icons and their functionality. This particular use of speech balloons has contributed to the incorporation of sequential art vocabulary into mainstream communication.

Sequential art demonstrates various trades as a visual communication tool; a visual sub-language in its own right. Therefore visual intelligence and visual literacy skills are required to understand the finer nuances of this particular convention. Sequential art has also demonstrated that the relationship between the visual and the verbal codes performs in such ways that it enhances learning capabilities and the retention of information and that it alleviates the overloading of information on our senses when presented in a coherent fashion.

As mentioned in this chapter, sequential art uses various conventions and the more we learn to 'read' comic books, the more we will learn to fully understand them (Berger 1998). Berger (1998) further elaborates that not only must one master the various conventions but also keep track of the intricate interplay between the visual and the linguistic elements. Berger (1998:133) quotes a piece out of *Adult Comics: an Introduction* by Roger Sabin (1993:9) to emphasise this point:

A strip does not 'happen' in the words, or the pictures, but somewhere in-between, in what is sometimes known as 'the marriage of text and image'. The strips may just be a mix of words and pictures, but the permutations of the two are almost endless –

limited only by the imaginations of the creators. In short, strips have their own aesthetic: they are a language with their own grammar, syntax and punctuation. They are not some hybrid form halfway between 'literature' and 'art' (whatever those words might mean), but a medium in their own right.

Although certain sequential art conventions are culturally based, from the superheroes genre which is mainly found in the West to the manga novels that are popular in the East, they do share similar sequential art conventions that cross international and cultural barriers in such a way that they are a valuable educational, persuasive and informational tool with which to convey a particular message (McCloud 1993). This chapter has clearly demonstrated that the visual and verbal codes of sequential art interact in various ways, and on different levels, both aiding each other to put across a consistent and coherent message. The interdependence of words and pictures is thus a vital component to sequential art if not essential for meaningful interpretation (Harvey 2005).

## CHAPTER 5

### STUDY DESIGN

#### 5.1 Introduction

Quantitative analysis is based on mathematical principles; in particular it focuses on statistical methods of surveying and the cross-examination of the data. Noble and Bestley (2005:63) describe the use of quantitative analysis in a visual research setting by means of examining an existing or specially designed visual document that depicts objects in specific locations in order to measure the positive and negative responses from a target audience. This particular type of survey can be conducted by means of using multiple-choice questions devised to score against a set of criteria. Noble and Bestley (2005) further elaborate that the data collected from the survey can then be converted to numbers, which will ultimately be analysed statistically to find the most prevailing visual form. Noble and Bestley (2005) also highlight the fact that as the size of the survey group increases, so will the accuracy of the results. Consequently a quantitative approach was taken in the gathering of the research data for this study to determine the relationship between the visual and verbal codes in a sequential art document.

This chapter will focus on the following key aspects: (1) the design of the sequential art document, (2) the profile of the study population, (3) the construction of the questionnaire, (4) the pilot phase and (5) the data collection methods.

#### 5.2 The designing of a sequential art document

The designing and production of the sequential art test visuals (i.e. Crash Test Dummies, see Appendix B) only commenced after taking into account a review of the literature. The focus of the sequential art document was to establish the relationship between the visual and the verbal components

(codes). In order to establish the relationship between the visual and the verbal codes in a sequential art document, the study population received a single sequential art document which was translated into one of the following languages (verbal code): English, Sesotho or Magyar (Hungarian). The visual code to all three of the documents was kept identical. Thus the relationship between the visual and the verbal codes was then established according to the extent of the comprehension of the study population, who received the document either in their primary home language or a secondary language, with Magyar being a foreign language to all of the members of the study population.

It was felt that in order to appeal to a diverse study population (see Table 5.2) the theme of the sequential art document should have a universal quality, to which a wide-ranging study population would be able to relate, in order to achieve a higher response rate to the questionnaire. Various everyday life aspects of the study population were taken into consideration and it was decided to focus on the study population's daily activity of commuting. The topic of travelling or commuting by road was then further explored and it was decided that an educational approach should also be included. This eventually led to the design of sequential art document with a road safety campaign theme. The characters of the sequential art document also had to appeal to the study population which consisted of people from various cultural backgrounds. Since it was not feasible to have characters from all the various cultural backgrounds represented in the sequential art document, it was decided to have characters that would be culturally neutral.

The first consideration was to employ different animals in a humanoid form as the characters of the sequential art document. However, it was thought that this option could be perceived as a deficiency in the design of the test visuals, seeing that a certain margin of the respondents may associate a variety of connotations (see Anthropomorphic characters, Chapter 4) with using animals as the main characters. It was also anticipated that the

interpretation of human emotions and gestures may be misplaced or not fully recognised if animals were used. Subsequently, research on road safety campaigns led to [www.fiafoundation.com](http://www.fiafoundation.com) which utilised crash test dummies in a sequential art setting to promote safer driving habits. After reviewing the information from the “THINK BEFORE YOU DRIVE” campaign it was decided to use crash test dummies as the characters for the sequential art document seeing that they do not belong to any specific culture, and that their humanoid form would allow for a full range of humanlike gestures and emotions.

### **5.2.1 FIA Foundation**

The FIA (Fédération Internationale de l'Automobile) Foundation is a non-profit federation of motoring organisations and the governing body of world motor sport. The FIA Foundation manages and supports an international programme of activities ranging from promoting road safety to funding specialist motor sport safety research. The “THINK BEFORE YOU DRIVE” campaign is a global road safety initiative of the FIA and the Bridgestone Corporation which features “Meet the dummies”. The campaign introduces a crash test dummy and his family set in a context in which they explain the importance of wearing a seatbelt, and related road safety features. The FIA Foundation made provision for the free<sup>1</sup> use of the actual resources including the logos and cartoon strips contained in the seatbelt campaign toolkit ([http://fiafoundation.com-seatbelt toolkit interactive online demo](http://fiafoundation.com-seatbelt_toolkit_interactive_online_demo)). The sequential art document for this study was subsequently based on the “THINK BEFORE YOU DRIVE” campaign (Meet the Dummies, see Appendix

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<sup>1</sup> “Readers may utilise any part of the toolkit to produce local material to help promote seat belt fitting and wearing, as long as the source is acknowledged” The toolkit was produced by TRL (Transport Research Laboratory) Limited under a contract placed by FIA Foundation. The provision can be found on the bottom of the contents page as well as the foreword page of the interactive toolkit which is in a PDF format. <http://fiafoundation.com>. Artwork (Meet the Dummies) by Bert van der Meij. © 2005 Comic House Netherlands

A). The motivation for aligning the sequential art document with the “Meet the Dummies” comic strip was primarily because of the successful implementation of the comic strip which had been translated into several world languages. The comic strip was designed in such a manner that it could be translated into various languages so that it would appeal to multiple cultures. The visual code of the “Meet the Dummies” comic strip is consistent for each of the multiple translations in which only the verbal code is translated. Authors such as Eisner (1985:14) also suggest that the success or failure of using imagery as a form of communication depends on the “ease with which the reader recognises the meaning”. Another factor for using the “Meet the Dummies” comic strip as the departure point was that a newly designed, untested comic book could prove to be a liability and affect the results of the research study in a negative manner.

### **5.2.2 Test visuals**

The “Meet the Dummies” comic strips were used as a point of departure for the “CRASH TEST DUMMIES” sequential art document or test visuals. The exact verbal code of the comic strip (English and Magyar versions – see Appendix A) was retained, along with the sequence of the events of the panels for the test pilot phase. The third sequential art document used in the data gathering stage was translated from English into Sesotho, which is currently the predominant home language of the study population attending the Vaal University of Technology (VUT). The Sesotho document was translated by several Sesotho-speaking lecturers from the VUT and subsequently also by a lecturer from the University of Johannesburg (UJ). The verbal code of each of the translations accordingly had exactly the same visual code. However, it was felt that the visual code of the “Meet the Dummies” had to be updated for the “Crash Test Dummies” adaptation and had to contain certain visual elements that made the document more recognisable. The inclusion of the certain subtle visual devices followed: the Johannesburg skyline appeared on the cover and on pages 2 and 4, while

the smoke stacks that are recognisable and well-known features of the Vanderbijlpark skyline were placed on pages 3 and 5. The characters and the vehicles and scenery were also changed, which allowed for far greater freedom for the design process of the sequential art document. The following software was used in designing the sequential art document: Macromedia Freehand MX (vector editing program) and Adobe Photoshop CS2 (photo manipulation program).

### **5.3 Profile and sampling of the study population**

The students from the Faculty of Human Sciences at the Vaal University of Technology formed the initial study sample from which the study participants were obtained (see Table 5.1). The study sample was then divided into two groups. The first group consisted of students who received visual training (RVT) in their respective courses, while the second group consisted of students who received no visual training (RNVT) in their respective courses which had been chosen from various courses offered in the Faculty of Human Sciences (see Table 5.2).

A non-probability sampling method was employed because specific groups were identified and targeted in the selection process (Babbie 2004:182). A convenience sampling process was then followed, which allowed for the easy administration of the questionnaires to the study population. An initial sample population of 300 students was envisaged, but this proved not to be feasible. The study sample from the group that RVT amounted to only 97 participants. As a direct result of this, the study sample from the group that RNVT had to be limited to the same number (see Table 5.2 and Appendix F for an overview of the courses enrolled for by the study participants, source: <http://www.vut.ac.za>).



**Table 5.1** Study sample from the VUT

<b>Faculty of Human Sciences</b>	
Fashion Design	Policing
Fine Art	Public Relations Management
Hospitality Management	Safety Management
Graphic Design	Travel and Tourism Management
Photography	

Table 5.2 indicates the composition of the study population. Groupings were made according to study participants who received visual training (RVT) and who received no visual training (RNVT) in their respective courses.

**Table 5.2** Composition of the study population

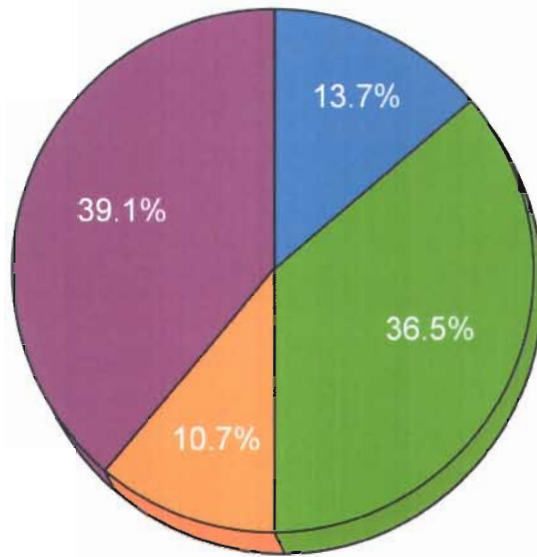
<b>Students from the following courses formed the study sample</b>					
<b>RVT</b>	<b>N</b>	<b>%</b>	<b>RNVT</b>	<b>N</b>	<b>%</b>
Fine Art	22	11	Public Relations Management	37	19
Graphic Design	69	35	Travel and Tourism Management	63	32
Photography	6	3			
<b>Total</b>	<b>97</b>	<b>49</b>	<b>Total</b>	<b>100</b>	<b>51</b>

**Key:** N = Number of study participants

RVT = Received Visual Training

RNVT = Received No Visual Training

The primary home language of the total study population comprised mainly of Sesotho-speaking students (36.5%). English and Zulu respectively had 13.7% and 10.7% speakers out of the total population. The rest of the home languages of the population came to 39.1%, which comprised of languages such as Afrikaans, French, Sepedi, Swazi, Tsonga, Tswana, Xhosa, (see Figure 5.1 and Table 5.3).



**Fig. 5.1** Pie chart with the percentages of the study population’s home language (see Table 5.3)

**Table 5.3** Study population according to home language

Study population			
Home language	Key	Frequency	Percent
English	Blue	27	13.7
Sesotho	Green	72	36.5
Zulu	Orange	21	10.7
Other	Purple	77	39.1
Total		197	100.0

Table 5.4 gives an overview of the gender groups according to frequency of comic book received as well as to groups who received visual training (RVT) and received no visual training (RNVT). Table 5.5 gives an indication of the percentage of males/females that held a valid driver’s licence. This was done in view of the fact that the topic of the test visuals was road safety.

**Table 5.4** Sample population according to the language of the comic book received, gender and RVT/RVNT groups

Gender	N	%	Groups				Language of comic book received					
			RVT		RVNT		English		Sesotho		Magyar	
			N	%	N	%	N	%	N	%	N	%
<b>Male</b>	89	45	50	25	39	20	23	12	35	18	31	16
<b>Female</b>	108	55	47	24	61	31	30	15	42	21	36	18
<b>Total</b>	197	100	97	49	100	51	53	27	77	39	67	34

**Table 5.5** Valid driver's licence

	Frequency	%	Male		Female	
			N	%	N	%
<b>Driver's licence</b>	53	27	22	25	31	29
<b>No driver's licence</b>	144	73	67	75	77	71
<b>Total</b>	197	100	89	100	108	100

#### 5.4 Classification of the test visuals

The visual/verbal content of the test visuals was classified according to the degree of visualisation on Wileman's (1993) visual/verbal continuum (see Table 5.6 and Appendix E) and also according to McCloud's (1993:152) word/image relationship (see Chapter 4). This was done to analyse the type of relationship that exists between the visual and verbal codes of the panels in the test material, as Wileman (1993:27) suggests the challenge is to produce striking combinations between visual and verbal codes, where the emphasis is on Types III, IV and V. According to Wileman (1993), these three types are generally supportive in terms of their educational quality.

**Table 5.6** Panels classified according to Wileman's (1993) visual/verbal continuum and McCloud's (1993:152) word/image relationship (See Appendix E, for panel identification)

<b>Test visuals (Comic book, English, Sesotho and Magyar version – visual code was kept identical)</b>											
<b>Page 2</b>			<b>Page 3</b>			<b>Page 4</b>			<b>Page 5</b>		
<b>Panel</b>	<b>Type</b> Wileman (1993)	<b>Relationship</b> McCloud (1993)	<b>Panel</b>	<b>Type</b> Wileman (1993)	<b>Relationship</b> McCloud (1993)	<b>Panel</b>	<b>Type</b> Wileman (1993)	<b>Relationship</b> McCloud (1993)	<b>Panel</b>	<b>Type</b> Wileman (1993)	<b>Relationship</b> McCloud (1993)
1.	IV	Interdependent	1.	V	Interdependent	1.	V	Interdependent	1.	V	Interdependent
2.	VI	Picture specific	2.	IV	Interdependent	2.	V	Additive	2.	V	Interdependent
3.	VII	Picture specific	3.	VII	Picture specific	3.	V	Additive	3.	V	Interdependent
4.	VII	Picture specific	4.	VII	Picture specific	4.	VII	Picture specific	4.	V	Interdependent
5.	V	Additive	5.	V	Additive	5.	VII	Picture specific	5.	V	Interdependent
6.	V	Interdependent	6.	V	Interdependent	6.	V	Interdependent	6.	V	Interdependent
7.	V	Interdependent	7.	V	Word specific	7.	VII	Picture specific	7.	VII	Picture specific
8.	V	Word specific	8.	V	Word specific	8.	VI	Picture specific	8.	V	Interdependent
			9.	V	Word specific	9.	V	Interdependent			
			10.	V	Duo-specific						
			11.	V	Interdependent						

## **5.5 Refinement of the test visuals according to the pilot phase**

The modifications to the sequential art document (test visuals) were made after completion of an initial pilot phase which occurred before the commencement of the actual data collection phase. Pretesting formed a vital part of the data collection implementation to minimise any errors that might occur in the questionnaire design (Babbie 2004:256). The pilot phase consisted of two groups of students from a visually and non-visually orientated course attended at the Ekurhuleni Campus of the Vaal University of Technology in Kempton Park. The first group consisted of 10 students (3 males and 7 females) of a visually orientated course (graphic design), while the second group consisted of 10 students (4 males and 6 females) attending a non-visually orientated course (travel and tourism management). The pilot phase highlighted the following limitations of the sequential art document (see Appendix B for the test visuals), which were subsequently rectified:

- In the initial set of test visuals, a paragraph outlining the objective of the research in relation to the topic of the subject matter referred to the test visuals as 'sequential art'. Some of the respondents pointed out that they were not familiar with the terminology. 'Sequential art' was amended to 'comic book', as this proved to be a more familiar expression.
- Female respondents felt that the female dummy (originally only viewed on page 5 of the comic book, see Appendix B) was inadequately represented. The frequency of the female dummy had to be increased seeing that it was proportionally less viewed than its male counterpart. The introduction page (page 2) originally only contained Crash, and another unknown male test dummy. This page was altered by substituting the one unknown male test dummy with a female test dummy named Carly. Consequently, page 3 was altered by replacing

the male dummy with a female dummy, thereby reaching parity between the appearances of both sexes of the test dummies.

- The test dummies on page 5 were originally viewed against a plain background. The background consisted of a plain white wall with chevron and measurement markings accompanied by a prohibition symbol (pictogram) on the top left-hand side to represent or illustrate a crash laboratory scene. Some of the respondents felt that page 5 was relatively dull compared to the other pages that had more interesting settings or backgrounds. The setting was accordingly changed to one that was more appealing and familiar to the study participants and one that would make the prohibition symbol (see Figure 5.2) less ambiguous (also see 5.6 Questionnaire construction, regarding Question 10). The crash laboratory scene was altered to reflect a filling station setting. See Appendix G for pictorial signs found at a petrol station.
- Students felt that the answer to Question 8 (What is the language of the comic book that you received?) in the demographic section could be improved by highlighting the 'language version', by making it more prominent, or by adding more references to what the specific language version of the comic book was. The language version originally only appeared on the top right-hand corner of the cover. The font used was Arial (Normal), and was 12 points in size. In the modified version, the language version appears on the top left-hand corner in a white diagonal strip. The font size was also increased to 16 points and a bold version of Arial was used instead. The frequency of the reference to the specific language version of the test material was also increased, and now also appears on pages 1 and 2 of the test material and not only on the cover (see Appendix B).



**Fig. 5.2** Prohibition symbol. Pictogram: “Turn automobile engine off”

Source: Doumont (2002:221)

### **5.6 Questionnaire construction**

The questionnaire was formulated in English after taking into account that it is the primary language for instruction at the Vaal University of Technology. The questionnaire was divided into three sections. The first section included the instructions for the study participant and also contained the rights of the study participant, namely that the participation in the research was voluntary and that the responses would be handled according to the research code of ethics of the VUT (see Appendix C). The second section covered the demographics of the study population while the third section pertained to the test visuals. The questionnaire also utilised open-ended and closed-ended questions (see Table 5.7). The closed-ended questions were used in a multiple-choice device response format (Kanjee 1999:296). The multiple-choice question formats consisted of a question and several alternative answers from which the respondents were allowed to choose one (Kanjee 1999:296). Each of the closed-ended questions had an open-ended question added on, in the format of “Comments”, whereby the respondents were afforded the opportunity to include any further remarks to the relevant question (Kanjee 1999).

**Table 5.7** List of open- and closed-ended questions (see Appendix C, for the complete questionnaire used during the data gathering phase)

Type of questions	
Closed-ended questions	Open-ended questions
Question 10	Questions 15 A, B, and C
Question 11	Question 17
Question 12	Question 19
Question 13	Question 20
Question 14	Question 21
Question 16	Question 22
Question 18	Question 23 (General comments) *

\* Question 23 did not form part of the quantitative data analysis

The demographic section of the questionnaire covered the following:

- Gender, age, primary home language and secondary languages
- Course and first year of enrolment of studies
- Whether the participant had a valid driver's licence
- The language of the comic book received (English, Magyar, Sesotho)

The comic book-related questions of the questionnaire covered the following:

- **Question 10.** Doumont (2002:221) points out that the pictogram of a key in a red circle crossed by a red diagonal line is often difficult to interpret without its accompanying verbal coding. Doumont (2002) located this pictogram at filling stations. It is used in conjunction with its verbal coding to indicate "Turn automobile engine off" according to



the exercise results that Doumont (2002:221) often conducts in his training programmes in connection with this pictogram. The training participants interpreted the pictogram without its verbal coding as either iconic, indexical or symbolic, with one of the following answers: a) “No keys allowed”, b) “Do not lock the door”, c) “Metal objects not allowed” and d) “The solution does not exist”. According to the *PASS YOUR LEARNER’S LICENCE FIRST TIME* manual (K53 compliant) it stipulates that “the engine should not run when the fuel cap is open” (Clack 1995:11). Question 10 utilised the pictogram and the answers that Doumont’s research normally obtain. The pictogram was used without its verbal coding, but was placed in the context of a petrol filling station on page 5 of the test visuals (see Appendix B). See Appendix G for the regulatory and prohibition signs that are visible at petrol stations in the Gauteng Area.

- **Question 11.** The question refers to the panel in the comic book on page 3. This is a good example where closure takes place (see McCloud (1993), Chapter 4). The participants’ responses varied between the five options given, which indicates that If the words “What do you think happened after this scene?” were added to the phrasing of the question then all the options could be plausible, and would depend on the study participants’ own interpretation. The question, however, is literal by nature and not figurative, which makes option A the correct answer.
- **Question 12.** This requests the study participant to indicate what happened in panel 4 on page 5 of the comic book. The correct answer is option C: “The female dummy explained what could happen if the car came to a sudden stop with the baby in the arms of the male dummy.” The female dummy gives a figurative explanation (verbal code), while option B is a literal depiction of what could happen.
- **Question 13.** Saraceni (2003) indicates that certain symbols are used to express a specific mental state of characters in comic books. This

question evaluates whether the study participants can identify what the star symbols represent.

- **Question 14.** This relates to the sequence in which the panels must be viewed. This question will identify whether the study participants can identify the proper syntax of the panels.
- **Question 15 A.** This relates to the use of the prohibition symbols for A: ‘No Parking’, ‘Parking Prohibited’, or ‘You may not park at any time on any portion of the road’ (Clack 1995).
- **Question 15 B.** This question asks what the sign indicates. It indicates the following: ‘No U-Turn’ or ‘U-Turn prohibited, you may not turn your vehicle around so that it is facing in the opposite direction’ (Clack 1995).
- **Question 15 C.** The study participants are required to properly interpret what the signage device that appears on page 3 signifies (see Appendices B and C).
- **Question 16.** The aim of this question was to establish whether the study participants could correctly interpret it if they did not receive the comic book in their first or second language, considering that the correct verbal message that accompanies the visual picture does not reflect the same message that the visual code depicts. McCloud (1993:153-155) refers to this as a parallel combination between pictures and words, and points out that they follow different routes (see Fig. 4.23, Chapter 4).
- **Question 17.** The correct answer indicates whether the study participants can correlate the correct action of the test dummy with the rest of the semantic field (area of meaning) on page 4 of the comic book (Saraceni 2003) and whether the symbols that are also visible in the panel can assist in this process.
- **Question 18.** Given the various options, the correct answer to the question indicates whether the study participants can correlate the correct action of the test dummy with the rest of the semantic field

(area of meaning) of page 4 of the comic book (Saraceni 2003).

- **Question 19.** This open-ended question requires the study participants to make an association or link between the tread of the dummies' shoes to the tread of the tyres. The visuals in question (tyres, and the dummies shoes) on page 3 of the comic book (see Appendix E) are repeated to reinforce the linkage between the tread of the shoes compared to the tread of the tyres.
- **Question 20.** The correct answer to this question depends on whether the study participants had viewed the preceding panel (1). This question requires the participants to link an object (traffic signal) as the root cause of the events that followed in panel 2 of page 2 of the comic book (see Appendix E). Coherence, according to Saraceni (2003), is the ability to link up a series of panels or sentences as a unified whole.
- **Question 21.** The question establishes whether the study participants are familiar with general comic book conventions. The speech balloon, according to Saraceni (2003), is the space in which most of the verbal code is enclosed (see Appendix E, page 3 of the comic book).
- **Question 22.** The question establishes whether the study participants are familiar with general comic book conventions. The thought balloon is a variation on the normal speech balloon, where the tail is presented as a series of small bubbles (Saraceni 2003). (See Appendix E, page 3 of the comic book.)

### **5.6.1 Refinement of the questionnaire according to the pilot phase**

As stated in section 5.5, modifications were made to the sequential art document after the completion of an initial pilot phase. The questionnaire subsequently also made use of pre-testing (Babbie and Mouton 2001:244). Pretesting of the data collection instrument formed an essential part in reducing or eliminating any errors. The pre-test subjects (see Section 5.5) comprised of a representative sample, although Babbie and Mouton (2001)

state that the pre-test subjects does not have to comprise of a representative sample. The pilot phase based on the 20 completed questionnaires highlighted the following inadequacies in the design of the questionnaire:

- The content of the demographics section was revised to include Question 9. The question enquires whether the respondent has a valid driver's licence. This closed-ended question is also a dichotomous question and solicits "clear yes or no answers" from the study participants (Kanjee 1999:296). The motivation for the inclusion of this question was done on the basis that a respondent with a driver's licence should be able to answer Question 15 (A and B) correctly It was felt that this particular variable could affect the outcome of the results.
- In Question 11, options B, C and D the phrasing was changed from "orange car" to "car on the left". The reason for this change was that some of the study population could possibly be visually impaired and might not perceive the car as orange, or that colour variation could occur between the printouts of the questionnaire and the test visuals.
- Questions 21 and 22 were added to ascertain if the study population was familiar with general comic book conventions.
- Question 23, which pertained to any general comments about the comic book, was retained. Although it did not form part of the quantitative data analysis (open-ended questions), it was considered a useful qualitative measurement instrument to gauge the study participants' view on the test material. The data gathered from this question could also prove to be useful for future research.

### **5.7 Data collection procedure**

The data collection phase occurred during the period of March 2007 to May 2007. The data was collected under the supervision of the relevant course lecturers. A total of eight lecturers from the various departments were

informed verbally what the research entailed, and were then thoroughly briefed on how to conduct the distribution and gathering of the questionnaires and test material. The lecturers were also informed of the VUT policy regarding the research code of ethics, and how to implement them. The briefing also contained a mock demonstration on how to conduct and distribute the various language versions of the test material. The importance of the equal distribution of the different language versions of the comic book was also made abundantly clear. The number of study participants involved per session was calculated in advance before the equal distribution of the test material took place. The test material was then randomly distributed to the study participants. Since the data gathering was done within group sessions, and not by means of individual interviews, no attempt was made to establish the home language of any of the study participants.

The following paragraph appeared on page 1 of the test visuals (see Appendix B):

Please examine the following pages of the comic book carefully and answer the subsequent questions on the supplied document marked “**Questionnaire on the Crash Test Dummies Comic Book**”. Please note that if you received a copy of the comic book in a foreign language, it is totally intentional and forms part of the research. You are nevertheless encouraged to complete the questionnaire and indicate what sense you make from the comic book. Feel free to ask questions if you are unclear about anything you read.

The following sentence was also added to the Sesotho and Magyar version of the above-mentioned paragraph:

An English version of the comic book will be made available afterwards for anyone who is interested.

The lecturers were also informed and encouraged to provide an English version of the test material to the relevant study participants but only after the completion and submission of the study participants' questionnaires. This was mainly done to afford the study participants who had received the test material in a foreign language the opportunity to reassess the verbal code of the test material. During the retrieval of the questionnaires from the various lecturers, feedback was received on how the data collection phase had gone.

### **5.8 Statistical handling of data**

Statkon, the statistical consultation department at the University of Johannesburg, was utilised for capturing the data as well as for the statistical analysis thereof. The calculations of the captured data were performed with SPSS version 14.0 (Statistical Programs for the Social Sciences) and Microsoft Excel 2003 software. The results of the statistical analysis were obtained according to the frequency of correct answers acquired from the questionnaire in which a one-way ANOVA analysis was utilised (Babbie and Mouton 2001). The questionnaire also followed two methods, whereby closed and open-ended questions were combined. The closed-ended questions provided preset alternatives for the study participants to choose from (Balnaves and Caputi 2001:105). The open-ended questions subsequently allowed the respondents to answer the questions freely in their own words. The answers to the open-ended questions were then post-coded and classified as nominal data (Balnaves and Caputi 2001:78). Question 23, however pertained to general comments about the comic book and did not form part of the quantitative data analysis.

### **5.9 Conclusion**

This chapter illustrated the course that the quantitative research design took and how it was ultimately implemented. The outline and motivation for the design of the test materials (comic book) were also described and an

indication was given of how the test pilot phase resulted in the modification of both the questionnaire and test material. The results of the 20 questionnaires obtained from the test pilot phase did not form part of the analysis of the empirical study which will be covered in the following chapter, but were merely utilised for the improvement of both the questionnaire and test material, as stated above. The platform of the research design established in this chapter had a direct bearing on the following chapter (Chapter 6) that will cover the evaluation of the research hypotheses and the analysis of the study population's comprehension of the visual rhetoric in the test materials (comic book).

## CHAPTER 6

### DATA ANALYSIS

#### 6.1 Introduction

The chapter focuses on the analysis of the findings of the empirical study and the evaluation of the research hypotheses as stated in Chapter 1. The chapter consists of (1) the evaluation of the research hypotheses, (b) an analysis of the findings of the empirical study, and (c) and the study participants' comprehension of the visual and verbal codes. The data analysed in this chapter was obtained from the data collection phase that gathered the 197 questionnaires that utilised both open- and closed-ended questions. A total of 203 questionnaires were received initially, but after careful examination of the questionnaires, six were found to be inadequate. The six questionnaires contained partial answers to the "*demographic section*" and contained none to the "*comic book related section*", which rendered them insufficient for the purpose of the study.

Mouton (2001:109) indicates that "incomplete questionnaires that contain numerous missing answers might introduce errors during the data capturing" phase. According to Neuman (1997:156) missing data can cause validity and reliability issues. Neuman (1997:156) furthermore indicates that there is four ways to deal with the missing data, although none fully resolve the problem. The four ways to deal with missing data according to Neuman (1997:156) is:

- "Eliminate all cases for which any information is missing."
- "Substitute the average score for cases where data is present."
- "Insert data based on non-quantitative information about the case"
- "Insert a random value"

After careful consideration it was concluded that the six study participants had initially taken some form of interest in the research, however decided not to continue further with their participation for personal reasons. One of



Neuman's (1997) methods for handling missing data was employed and subsequently it was decided that the six incomplete questionnaires should be discarded, considering that the participation was entirely voluntary and done according to the research ethics of the Vaal University of Technology (Raijmakers 2004). All the study participants had been verbally briefed ahead of their participation with regard to their rights pertaining to the research study. In addition, the questionnaires as well as the test visuals also contained a section with instructions (see Appendices B and C) that featured the rights of the study participants with regard to their participation in the research study.

## **6.2 Assessment of the research hypotheses**

The research hypotheses of the study as described in Chapter 1 were stated as follows:

Hypothesis 1: The comprehension of the visual code of the visual rhetoric used in a sequential art setting differs between (a) study participants that received visual training prior to data collection (the RVT group) and (b) study participants that did not receive visual training prior to data collection (the RNVT group).

Hypothesis 2: The comprehension of the visual code of the visual rhetoric used in a sequential art setting differs between (a) study participants that received test material in their home language and (b) study participants that did not receive the test material in their home language.

The results as obtained from the data gathered with regard to the groups of study participants that received visual training (RVT) compared to the study participants that received no visual training (RNVT) showed a significant statistical difference ( $p=0.00$ ). This significant statistical difference applied to both open- and closed-ended questions. On the basis of the results achieved, Hypothesis 1 was not rejected and the null hypothesis (see Chapter 1) was subsequently rejected. The results are tabulated in Tables

6.3, 6.4 and 6.7. Hypothesis 2 (as stated previously) regarding the comprehension of the test material language, delivered unexpected results. The results indicated a significant statistical difference ( $p=0.014$ ) for the closed-ended questions, and a statistical difference ( $p=0.669$ ) for the open-ended questions. Even though there was a significant statistical difference ( $p=0.014$ ) between the groups for the closed-ended questions, the open- and closed-ended questions combined indicated no significant statistical difference ( $p=0.138$ ). (See Tables 6.5 and 6.6).

Hypothesis 2 was rejected in favour of its null counterpart. The null hypothesis of Hypothesis 2 as described in Chapter 1 was stated as follows:

Hypothesis 2: The comprehension of the visual code of the visual rhetoric used in a sequential art setting will not differ between (a) study participants that received test material in their home language and (b) study participants that did not receive the test material in their home language.

The acknowledgment of the null hypothesis was however done with a certain degree of apprehension. The results as stated indicated that there was no significant statistical difference ( $p=0.138$ ) between the study participants that received the test material in their home language (Group A) and the study participants that did not receive it in their home language (Groups B and C). (See Table 6.1)

**Table 6.1** Study population according to language proficiency

<b>Group</b>	<b>Language proficiency of test material received</b>	<b>N</b>
A	Home language (English or Sesotho)	44
B	Second language (English or Sesotho)	38
C	Foreign language (Magyar or Sesotho)	115
<b>Total</b>		<b>197</b>

One of the main reasons for the apprehension regarding the results in favour of the null hypothesis of Hypothesis 2, is that the study participants that received the test material in their home language only numbered 44 (Group A) versus the 153 study participant (Groups B and C) that did not receive the test material in their home language. Group A accounts for 22.3% of the study population while Groups B and C together account for 77.7% of the study population. Out of the total of 153 study participants that did not receive the test material in their home language, 38 participants (Group B) received it in a second language with which they were familiar. The remaining number of study participants, which amounted to 115 (Group C) of the sample population, received the test material in a foreign language which they were not familiar with or proficient in (see Table 6.1). The variance between the total numbers of the groups (A, B and C) is due to the method that was used during the data collection phase. Great effort was made to deliver the test material (three language versions: English, Magyar and Sesotho) to the study participants from the RVT and RNVT groups in approximately equal numbers (see Table 5.2, Chapter 5).

Calculations were made before each session to ascertain the correct and equal number of language versions that had to be distributed to the study participants. The test material was then randomly supplied to the study participants. No attempt was made beforehand to establish the home language of any of the study participants or even to subdivide the groups according to their home language, since it was felt that this could be a sensitive issue, and could also be considered biased by the different study participants that did not initially receive the test material in their respective home languages (see Chapter 5).

On further inspection, between the individual groups (A, B and C) a Bonferonni test was performed which indicated that a significant statistical difference ( $p=0.038$ ) had emerged between Group A and Group C. (See Table 6.2). Group A received the test material in a Home language (English or Sesotho), and Group C received the test material in a Foreign language

(Magyar or Sesotho). The Bonferonni Test is a useful analysis to make comparisons across multiple groups of subjects and was therefore utilised to make pair wise comparisons between the individual language proficiency groups (Group A, B and C) of this study (see Table 6.1). This results and subsequent variance between Group A and C indicate that the verbal code does play an important part when the study participants are fully proficient in a particular language.

**Table 6.2** Bonferonni test between Groups A, B and C

Multiple comparisons		Mean Difference (i-ii)	Std. Error	Probability	
Group (i)	Group (ii)			Sig.	
A	B	.50957	.33780	0.399	NS
A	C	.68142*	.27039	0.038	S
B	C	.17185	.28542	1.000	NS

\*The mean difference is significant at the .05 level.

**Key:** NS = Not significant S = Significant at the .05 level

### 6.3 Content analysis

#### 6.3.1 Analysis of the results according to language proficiency

The analysis of the results are based on the frequency of correct answers obtained from the study participants (Group A) that received the test material in their home language compared to the study participants (Groups B and C) that did not receive the test material in their home language (see Table 6.8). Where applicable, analyses of the separate groups (A, B and C) were also done. With regard to Question 14 (In which sequence is one supposed to look at the panels on a page of the comic book?), unexpected results were obtained for Group B, the study participants that received the test material in a second language. This group had 43.2% correct answers, compared to the study participants that received the sequential art material in a first language (Group A), who had 72.1% correct. The study participants that received it in a foreign language (Group C) had 73.9% correct. Group B had significantly fewer correct answers than Groups A and C.

Question 16 (What did the dummy say in this panel?) delivered expected results, where the percentage of correct answers was directly influenced by whether the study participants received the test material in a home language (Group A), second language (Group B) or foreign language (Group C). Group A had the following percentage of correct answers: 93% compared to the 67.6% from Group B and the 26.1% from Group C. There was also a significant statistical difference ( $p=0.00$ ) between the groups (A, B and C) that supported the premise that to answer Question 16 correctly depends on the verbal code. Questions 21 and 22 tested whether the study participants were familiar with comic book conventions (see Chapter 5). The percentage of correct answers for Question 21 (What does the following visual device indicate?) for Group A was 86.4% compared to the 85% from Groups B and C. For Question 22 (What does the following visual device indicate?) Group A had the following percentage of correct answers: 81.8% compared to the 78.4% of Groups B and C. The results of Question 21 and 22 indicated no significant statistical difference ( $p=0,517$ ), ( $p=0,399$ ) respectively between the groups that received the test material in a home language (Group A) and the study participants (Groups B and C) that did not receive it in their home language.

### **6.3.2 Analysis of RVT and RNVT groups**

The results from the study participants that RVT and those that RNVT are based on the frequency of correct answers relating to their comprehension with regard to visual rhetoric in a sequential art setting (see Tables 6.4 and 6.7). The groups that RVT answered 74% of the questions correctly (both the open- and closed-ended questions), while the groups that RNVT only answered 54.6% of the answers correctly (see Fig. 6.2). In the group that RVT the percentage of correct answers was 43.3% for Question 16 (What did the dummy say in this panel?) compared to the RNVT group that had 54% correct. This unexpected result can be attributed to the fact that 63% of the RNVT group received the test material in their first or second language compared to the 48.4% of the RVT group.

This particular question (Question 16) is what McCloud (1993:153-155) refers to as an interdependent combination between pictures and words, where both visual and verbal jointly express an idea that neither could communicate alone (see Table 4.1, Chapter 4). The ability of the study participants to interpret this particular panel (visual code) correctly from the test material is dependent on the verbal code for clarification. As the results indicated in section 6.3.1, the percentage of correct answers related to Question 16 increased when the study participants received it in a language with which they were familiar. Two of the study participants that RVT answered Question 20 (Why do you think this accident happened?) with the following explanation: "The cause of the accidents is totally intentional, considering that the test dummies are fulfilling their respective function." One of these two study participants also pointed out that in the opening panel it was stated that the crash test dummies crash cars for a living.

As stated before (section 6.3.1), Questions 21 and 22 tested whether the study participants were familiar with comic book conventions (see Chapter 5). Although there was no significant difference in results between Group A and Groups B and C, the percentage of correct answers for Question 21 (What does the following visual device indicate?) for the group that RVT was 96.9%, which was considerably higher than the 74% obtained by the group that RNVT. Question 22 (What does the following visual device indicate?) followed a similar pattern, where the group that RVT had 94.8% correct answers compared to the 64% of the group that RNVT. The results of Questions 21 and 22 indicate that the group that RVT were more familiar with comic book conventions than the group that RNVT showed a significant statistical difference ( $p=0.00$ ). However, as indicated earlier, the results in relation to Questions 21 and 22 are not dependent on the language proficiency of the study participants (see Fig 6.3).

### **6.3.3 Analysis of the questionnaire**

The general feedback from the study participants with regard to Question 23 (Any general comments about the comic book?) was overwhelmingly positive

except for seven recorded cases that were unenthusiastic about the research study. The comments in general stated that the comic book was clearly illustrated and easy to interpret. The road safety topic in general also received positive feedback. A certain proportion of the study participants felt that it was humorous while another section of the respondents felt that it was a serious and important topic, and that the format was an excellent way to learn about road safety. The results of the males and females of the RVT and RNVT as well as the language proficiency groups showed no significant statistical difference ( $p=0.368$ ).

The average percentage for correct answers to the Question 11 (What happened after this scene?) and Question 12 (What happened in this scene?) was 7% and 37% respectively (see Tables 6.7 and 6.8). The results for Question 11 indicate that 30% of the study participants chose option D (The car on the left drove into the jeep on the right because of its worn tyres). The results for Question 12 indicate that 47% of the study participants opted for option B (The baby went flying through the windscreen), which is the literal depiction, instead of the correct answer, option C (The female dummy explained what could happen if the car came to a sudden stop with the baby in the arms of the male dummy) where the female dummy gives a figurative explanation (verbal code) of the events that could happen.

The results obtained from these two questions could be a direct result of the actual phrasing of the specified questions. However, the results of the pilot phase did not indicate any such variance in Questions 11 and 12 respectively. A Cronbach alpha test for an internal consistency analysis of the questionnaire was also performed. This was done to verify the consistency of the study participants' responses (Santos 1999). A Cronbach alpha value of 0.7 was obtained, which can be considered to be an acceptable internal reliability value. Santos (1999) accordingly refers to Nunnally (1978) who states that a Cronbach alpha value of 0.7 and above is deemed to be a satisfactory and reliable coefficient.

#### **6.3.4 Driver's licence analysis**

As stated previously, 27% of the study population had a valid driver's licence (see Table 5.5, Chapter 5). The results from the study participants that had a valid driver's licence compared to the study participants that had no valid driver's licence showed a notable difference between the percentages of correct answers. The results of the study participants that had a valid driver's licence indicated no significant statistical difference ( $p=0.066$ ) in the open-ended questions and a significant statistical difference ( $p=0.000$ ) in the closed-ended questions. The group that had a valid driver's licence showed a significant statistical difference ( $p=0.001$ ) for both the open- and closed-ended questions combined, compared to the study participants that did not have a valid driver's licence. The study participants that had a valid driver's licence performed far better than the study participants that had no valid driver's licence.

#### **6.4 Conclusion**

The outcome of the one-way ANOVA analysis of the empirical component supports Hypothesis 1 of the study that was stated in Chapter 1, namely that there is a significant statistical difference ( $p=0.00$ ) in the comprehension of the visual and verbal codes of visual rhetoric in a sequential art setting between the study participants that received visual training (RVT) in their respective courses and the study participants that received no visual training (RNVT) in their respective courses.

Hypothesis 2 was rejected in favour of its null counterpart, according to the following statistical difference ( $p=0.138$ ), namely that the comprehension of the visual and verbal codes of visual rhetoric in a sequential art setting does not differ between the study participants (Group A) that received the test material in their home language and the study participants (Groups B and C) that did not receive it in their home language.



As a result of the study it can be concluded that the relationship between visual and verbal codes is reinforced if the study participant had received some form of visual communication training, even though there was no significant statistical difference ( $p=0.138$ ) between Group A that received it in the home language and Groups B and C that did not receive it in their home language. There was, however, a significant statistical difference ( $p=0.038$ ) between Group A (received test visuals in a home language) and Group C (received test visuals in a foreign language). This variance indicates that the verbal code also plays an important part when the study participants are fully proficient in the particular language.

**Table 6.3** One-way ANOVA analysis between RVT and RNVT groups

<b>Descriptives</b>									
	Course according to visual training	N	Mean	Std deviation	Std error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower bound	Upper bound		
<b>Closed questions</b>	<b>RVT (Received Visual Training)</b>	97	4.1546	1.32555	.13459	3.8875	4.4218	.00	6.00
	<b>RNVT (Received No Visual Training)</b>	100	3.3800	1.30097	.13010	3.1219	3.6381	1.00	7.00
	<b>Total</b>	197	3.7614	1.36611	.09733	3.5695	3.9534	.00	7.00
<b>Open questions</b>	<b>RVT</b>	97	6.9691	1.10353	.11205	6.7467	7.1915	3.00	8.00
	<b>RNVT</b>	100	4.9000	1.81186	.18119	4.5405	5.2595	1.00	8.00
	<b>Total</b>	197	5.9188	1.82486	.13002	5.6624	6.1752	1.00	8.00
<b>Total correct</b>	<b>RVT</b>	97	11.1237	1.99091	.20215	10.7225	11.5250	6.00	14.00
	<b>RNVT</b>	100	8.2800	2.70831	.27083	7.7426	8.8174	2.00	13.00
	<b>Total</b>	197	9.6802	2.77089	.19742	9.2909	10.0695	2.00	14.00

**Table 6.4** One-way ANOVA analysis between RVT and RNVT groups

ANOVA						
		Sum of squares	df	Mean square	F	Sig.
Closed questions	Between groups	29.546	1	29.546	17.135	.000
	Within groups	336.240	195	1.724		
	Total	365.787	196			
Open questions	Between groups	210.793	1	210.793	93.017	.000
	Within groups	441.907	195	2.266		
	Total	652.701	196			
Total correct	Between groups	398.177	1	398.177	70.160	.000
	Within groups	1106.675	195	5.675		
	Total	1504.853	196			

**Table 6.5** One-way ANOVA analysis between Group A and Group (B/C)

<b>Descriptives</b>									
	Comic book in home language	N	Mean	Std deviation	Std error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
<b>Closed questions</b>	<b>No (Groups B and C)</b>	153	3.6340	1.26049	.10190	3.4327	3.8353	1.00	6.00
	<b>Yes (Group A)</b>	44	4.2045	1.62222	.24456	3.7113	4.6977	.00	7.00
	<b>Total</b>	197	3.7614	1.36611	.09733	3.5695	3.9534	.00	7.00
<b>Open questions</b>	<b>No (Groups B and C)</b>	153	5.8889	1.85868	.15027	5.5920	6.1858	1.00	8.00
	<b>Yes (Group A)</b>	44	6.0227	1.71842	.25906	5.5003	6.5452	1.00	8.00
	<b>Total</b>	197	5.9188	1.82486	.13002	5.6624	6.1752	1.00	8.00
<b>Total correct</b>	<b>No (Groups B and C)</b>	153	9.5229	2.74122	.22161	9.0850	9.9607	2.00	14.00
	<b>Yes (Group A)</b>	44	10.2273	2.83552	.42747	9.3652	11.0893	3.00	14.00
	<b>Total</b>	197	9.6802	2.77089	.19742	9.2909	10.0695	2.00	14.00

**Table 6.6** One-way ANOVA analysis between Group A and Group (B/C)

ANOVA						
		Sum of squares	df	Mean square	F	Sig.
Closed questions	Between groups	11.124	1	11.124	6.116	.014
	Within groups	354.662	195	1.819		
	Total	365.787	196			
Open questions	Between groups	.612	1	.612	.183	.669
	Within groups	652.088	195	3.344		
	Total	652.701	196			
Total correct	Between groups	16.956	1	16.956	2.222	.138
	Within groups	1487.897	195	7.630		
	Total	1504.853	196			

**Table 6.7** Correct answers according to RVT and RVNT groups

Questions		Correct answers %		Average %	Probability	
Closed-ended	Open-ended	RVT	RVNT			
Question 10		60	46	53	.053	NS
Question 11		06	08	07	.622	NS
Question 12		44	29	37	.025	S
Question 13		90	94	92	.271	NS
Question 14		88	48	68	.000	S
	Question 15a	98	71	84	.000	S
	Question 15b	92	46	69	.000	S
	Question 15c	96	92	94	.258	NS
Question 16		43	54	49	.134	NS
	Question 17	79	51	65	.000	S
Question 18		84	59	72	.000	S
	Question 19	87	64	75	.000	S
	Question 20	54	28	41	.000	S
	Question 21	97	74	85	.000	S
	Question 22	95	64	79	.000	S

**Key:** NS = Not significant S = Significant at the .05 level

RVT = Received Visual Training RVNT = Received No Visual Training

\*Question 23 did not form part of the quantitative data analysis. (See Section 5.6.1)

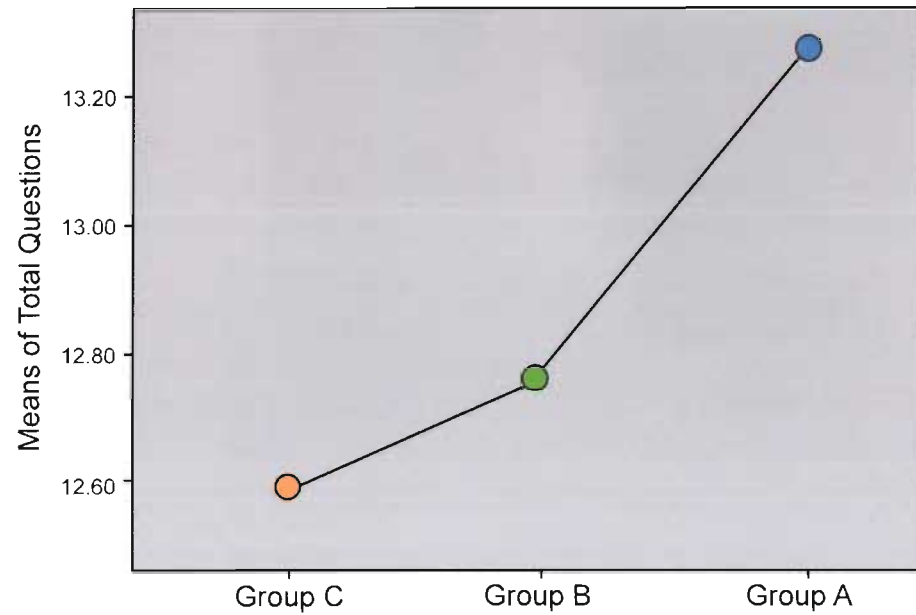
**Table 6.8** Correct answers according to language proficiency

Questions		Correct answers %		Average %	Probability	
Closed-ended	Open-ended	Group A	Group B/C			
Question 10		57	52	53	.546	NS
Question 11		05	08	07	.456	NS
Question 12		32	38	37	.462	NS
Question 13		91	92	92	.791	NS
Question 14		70	67	68	.638	NS
	Question 15a	89	83	84	.369	NS
	Question 15b	70	68	69	.756	NS
	Question 15c	95	93	94	.629	NS
Question 16		93	36	49	.000	S
	Question 17	61	66	65	.571	NS
Question 18		74	70	72	.763	NS
	Question 19	77	75	75	.710	NS
	Question 20	41	41	41	.964	NS
	Question 21	86	85	85	.819	NS
	Question 22	82	78	79	.628	NS

**Key:** NS = Not significant S = Significant at the .05 level

Group A = Received test material in a home language Group B/C = Received test material not in home language

\*Question 23 did not form part of the quantitative data analysis. (See Section 5.6.1)

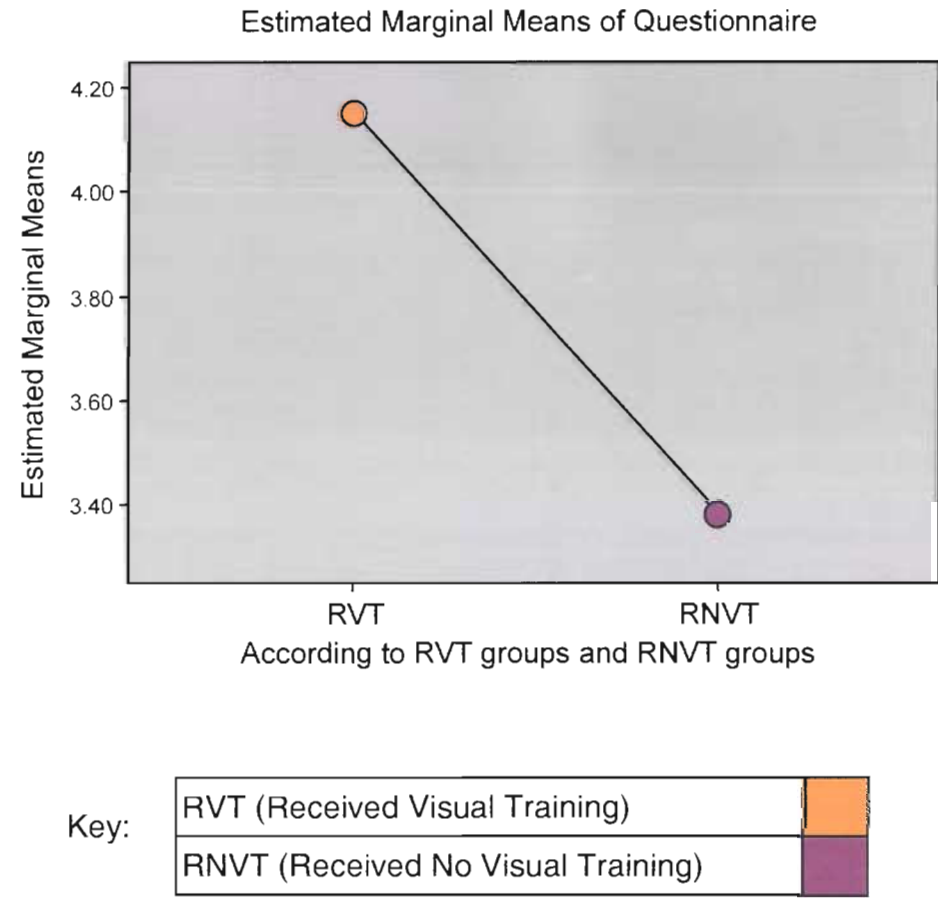


Key:

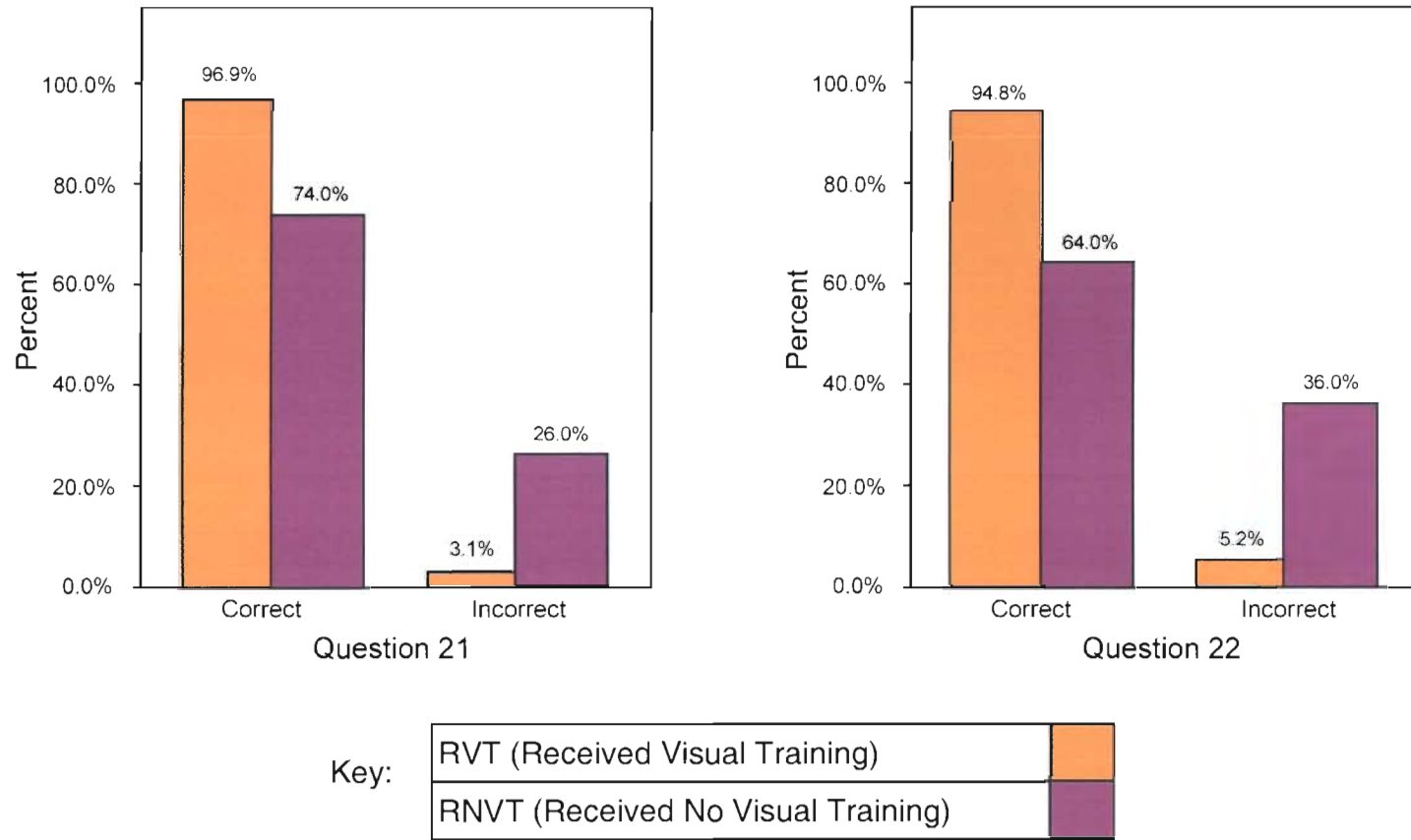
Group A	Home language (English or Sesotho)	<span style="display: inline-block; width: 15px; height: 15px; background-color: blue; border: 1px solid black;"></span>
Group B	Second language (English or Sesotho)	<span style="display: inline-block; width: 15px; height: 15px; background-color: green; border: 1px solid black;"></span>
Group C	Foreign language (Magyar or Sesotho)	<span style="display: inline-block; width: 15px; height: 15px; background-color: orange; border: 1px solid black;"></span>

**Fig. 6.1** Mean plot according to language groups





**Fig. 6.2** Mean plot according to RVT and RNVT groups



**Fig. 6.3** Bar graph indicating results for Questions 21 and 22 according to RVT groups and RNVT groups

## CHAPTER 7

### CONCLUSION

#### 7.1 Summary

The aim of the study was to determine the relationship between visual and verbal codes of visual rhetoric in a sequential art setting. An overview of the literature chapters highlighted the significance of visual literacy. It also called attention to the fact that the specific skills acquired from visual literacy have a wide-ranging effect on visual communication as a whole. Reflecting on the findings of the results as stated in the previous chapter, the first hypothesis was not rejected, namely that the comprehension of the visual code of the visual rhetoric used in a sequential art setting differs between (a) study participants that received visual training prior to data collection (the RVT group) and (b) study participants that did not receive visual training prior to data collection (the RNVT group), in their respective courses. The conclusion was made that the relationship between visual and verbal codes was reinforced if the study participants received some form of visual communication training.

The second hypothesis was, however, rejected in favour of its null counterpart, which stated the following: the comprehension of the visual code of the visual rhetoric used in a sequential art setting will not differ between (a) study participants that received test material in their home language and (b) study participants that did not receive the test material in their home language. As indicated previously, this result could firstly be attributed to the method that was employed during the data collection phase (see Chapter 6), or secondly to the fact that the classification of the test visuals as described by Wileman (1993) performed better than expected (see Chapters 3 and 5). Although not stated in the second hypothesis, the study participants that received the test material in their home language (Group A) attained a

significant statistical difference ( $p=0.038$ ) compared to the study participants that received it in a foreign language (Group C). (See Table 6.2).

## **7.2 Limitations of the study**

The study concentrated specifically on the relationship between the visual and verbal codes; however a possible avenue that might have been explored was the mnemonic effect that the visual codes could have in a sequential art setting. Although the testing of these memory devices did not form part of the empirical study, it became apparent during the literature review that any future research in a sequential art setting may only benefit from the inclusion of mnemonics. However, there was no clear indication that the method employed during the data collection phase in any manner negatively affected the findings in favour of the null hypothesis of the second hypothesis. An equal distribution between the three groups (Groups A, B and C; see Table 6.1) would have confirmed the results without any prejudice. The Cronbach alpha value of 0.7 however also supports the internal reliability of the questionnaire (see section 6.3.3).

## **7.3 Contribution and recommendations of the study**

The results of the study validate the view that the relationship that exists between visual and verbal codes has great potential as a modern communication tool in a global society, as previously described by Horn (1998). The results also further indicate that the visual code plays a major role in sequential art, as the results obtained for Hypothesis 1 suggests. This attribute of sequential art could be utilised in strategic avenues of curriculum development. As a result of the study, the conclusion can be made that the relationship between visual and verbal codes is reinforced when the study participants have received some form of visual communication training. The results of the empirical study also have a significant importance for the development of future course-ware that may include various forms of visual

media that may rely on the function that visual literacy can fulfil to fully utilise the strong bond that exists between visual and verbal codes in a modern visual communication or educational setting.

#### **7.4 Possibilities for future research**

The possibilities for future research in sequential art and in the dual use of visual and verbal elements in a visual communication setting may be approached with reference to the following avenues of research topics:

Moreno and Mayer (2000) advocate that visuals and words are likely to facilitate learning when they are designed to assist people in the selection, organisation and integration process of information in a systematic and meaningful manner. Additional research is required to investigate if and how undergraduate students incorporate visual and verbal information as part of their learning strategy and whether the creation of learner friendly visuals or material will assist and improve the academic results of the students attending at the Vaal University of Technology. Special reference to the mnemonic effect or improvement of memory recall that visuals help facilitate could also form part of any future research in a visual communication setting at the Vaal University of Technology.

With regard to the theme of the test visuals used for the purpose of this research, future research could be conducted in the area of driver's licence tests in South Africa. An article published in *The Star* newspaper reported that almost two-thirds of driver's licence applicants in South Africa fail the driver's licence test (Da Costa 2007). According to the figures made available by the Transport Minister, Jeff Radebe, only 39% of the applicants pass their driver's licence test (Da Costa 2007). This equates to approximately a million out of the 1.5 million applicants who failed the test between the period July 2005 to June 2007 (Da Costa 2007). Possibilities for future research could include an investigation into the factors that account for the low pass rate and

whether sequential art could form part of an overall solution to improve the pass rate.

Evamy (2003:33) highlights the fact that pharmaceutical companies have been advised to make their advice or instructions more visible and rudimentary on their packaging, seeing that low literacy levels affect patients' ability to adhere to medication guidelines with serious consequences to their health (according to a study at the Medical College of Wisconsin). Pictograms issued by the United States Pharmacopeia (USPC 1997®) have been developed for this specific reason. They are freely available to drug companies, although some require further analysis which could possibly lead to future research in the use of these pictograms in a sequential art setting.

Other possible avenues for future research could be explored to illustrate how and why sequential art is being used as a form of propaganda by various governments, and how these governments utilise sequential art as a form of psychological warfare to instil fear in populations with the aim to destabilise or topple regimes (Evamy 2003). Modern examples exist where the coalition forces led by the USA dropped comic book style leaflets during the first Gulf war (Operation Desert Storm) in Iraq. The crude hand-drawn style of the material of the aerial propaganda was designed to have maximum impact on the morale of the Iraqi troops, according to the research done by the Central Intelligence Agency's Psychological Operations (PSYOPS) Division (Evamy 2003:94). After the 9/11 World Trade Towers attack PSYOPS directed their attention towards the Afghan civilian population. The objective of the operation was to inform the civilian population of the intended liberation from the Taliban regime. The overwhelmingly pictorial style of the material was essential in view of the 70% illiteracy rate that existed in Afghanistan. Computer-generated humanitarian leaflets showed how to feed a family on humanitarian daily rations which were distributed at the same time to win over the hearts and minds of the Afghan population (Evamy 2003:94).

The nature and scope of sequential art lends itself to be utilised as a form of mass communication that can entertain, inform, manipulate and educate people from different cultural backgrounds, languages and literacy levels. Future research in the area of sequential art can be conducted to legitimise its communication credentials and to explore this powerful and memorable mode of communication that employs both visual and verbal elements (Lester 2006).

According to Noble and Bestley (2005:27) research methodologies have become more significant in visual communication in recent times, and far greater emphasize is placed on the processes and methods employed by the designers of these visual messages. References made to visual communication in university departments, art colleges and design journals consistently include the responsibilities of a designer in a social, cultural and economic context. Furthermore the research conducted in this field routinely focuses on the construction the intention and finally the interpretation of this verbal and visual medium. Future research conducted on the topic of visual and verbal integration will have far reaching impact on how this medium is ultimately incorporated in everyday mass media.

## BIBLIOGRAPHY

- ABRAMS, M.H. and HARPHAM, G. 2005. *A Glossary of Literary Terms*. Eighth Edition. Boston, MA, USA: Thomson Wadsworth.
- ALVAREZ, T. 1996. *How to Create Action, Fantasy and Adventure Comics*. Cincinnati, Ohio: North Light Books.
- AVGERINO, M. 2005. *What is Visual Literacy?* [Online]. Available at <[http://www.ivla.org/org\\_what\\_vis\\_lit.htm](http://www.ivla.org/org_what_vis_lit.htm)>. Accessed: 16/03/2005.
- BABBIE, E. and MOUTON, J. 2001. *The Practice of Social Research*. Cape Town: Oxford University Press Southern Africa.
- BABBIE, E. 2004. *The Practice of Social Research*. 19<sup>th</sup> ed. Belmont, CA, USA: Thomson Wadsworth.
- BALNAVES, M. and CAPUTI, P. 2001. *Introduction to quantitative research methods*. London, UK: Sage Publications.
- BAMFORD, A. 2003. *The Visual Literacy White Paper*. Commissioned by Adobe Systems Incorporated Pty Ltd, Australia. [Online]. Available at <<http://www.adobe.co.uk/education>>. Accessed: 08/11/2006.
- BARRY, A.M.S. 1997. *Visual Intelligence. Perception, Image, and Manipulation in Visual Communication*. New York, USA. State University of New York Press, Albany.
- BERGER, A.A. 1998. *Seeing is believing. An Introduction to visual Communication*. Mountain View, CA: Mayfield Publishing Company.



BERRYMAN, G. 1990. *Notes on Graphic Design and Visual Communication*. Menlo Park, California: Crisp Publications, Inc.

BONGCO, M. 2000. *Reading Comics: Language, Culture, and the Concept of the Superhero in Comic Books*. New York, NY: Garland Publishing Inc.

BONNICI, P. 1999. *Visual language. The hidden medium of communication*. New York, NY: Watson-Guptill Publications.

BRADEN, R.A. 1996. *Visual Literacy*. In *Handbook of research for educational communications and technology*. Edited by D.H. Johassen. New York: Simon and Schuster. pp. 491-520.

BURGIN, V. 1982. *Photographic Practice and Art Theory*. In *Thinking Photography*. Edited by V. Burgin. Basingstoke: The Macmillan Press. pp. 39-83

BURMARK, L. 2002. *Visual Literacy: Learn to see, See to learn*. Virginia, USA: Alexandria.

CARRIER, D. 2000. *The Aesthetics of Comics*. Pennsylvania: Penn State Press.

CAMERON, R. D. 2002. *Four Concepts in Programming Language Description: Syntax, Semantics, Pragmatics and Metalanguage*. [Online]. Available at <<http://www.cs.sfu.ca/~cameron/Teaching/383/syn-sem-prag-meta.html>>. Accessed: 17/07/2006.

CAPUTO, T.C. 2003. *Visual Storytelling; The Art and Technique*. New York, NY: Watson-Guptill Publications.

CHANDLER, D. 2002. *Semiotics: The Basics*. New York: Routledge.

CHINN, M. 2004. *Writing and illustrating the Graphic Novel. Everything you need to know to create great graphic works*. London, UK. A & C Black Publishers.

CLACK, J. 1995. *Pass your Learner's licence first time*. Cape Town: Struik Publishers (Pty) Ltd.

COBLEY, P. and JANSZ. L. 2004. *Introducing Semiotics*. Royston, UK: Icon Books Ltd.

COHN, N. 2003. *Interfaces and Interactions*. Emaki Productions. [Online]. Available at: < <http://www.emaki.net/readings.html> >. Accessed: 29/03/2005.

COMICS BREW. 2004. Comics Brew: An Exhibition of International Comic Art - NSA Gallery. [Online]. Available at: < <http://www.absolutearts.com/artsnews/2004/09/15/32363.html> >. Accessed: 15/05/2006

DA COSTA, W.J. 2007. Only 39% pass driving licence test. *The Star*. pp. 2, 18/02/2007.

DONDIS, D.A. 1973. *A Primer of Visual Literacy*. 13<sup>th</sup> ed. Cambridge, Massachusetts: The MIT Press.

DOUMONT, J. 2002. *Verbal vs. Visual: A word is worth a thousand pictures, too*. *Technical Communication, Volume 49, Number 2*, pp. 219-224.

DRAGGA, S. and GONG, G. 1989. *Editing: The Design of Rhetoric*. Amityville, NY: Baywood.

DURRHEIM, K. 1999. *Research design. In Research in Practice: Applied methods for social sciences.* Edited by M. Terre Blanche and K. Durrheim. Cape Town: University of Cape Town Press.

ECO, U. 1982. *Critique of the image. In Photographic Practice and Art Theory. In Thinking Photography.* Edited by V. Burgin. London: The Macmillan Press. pp. 32-38

EISNER, W. 1985. *Comics & Sequential Art.* Florida: Poorhouse Press.

EVAMY, M. 2003. *World without words.* London: Laurence King Publishing.

FIA, Foundation for the Automobile and Society. 2005. Think Before You Drive Campaign. [Online]. Available at <<http://www.fiafoundation.com>>. Accessed: 24/03/2006.

FONTANA, D. 2003. *The Language of Symbols: A visual key to symbols and their meaning.* London: Duncan Baird Publishers.

FOSS, S. K. 1994. *A rhetorical schema for the evaluation of visual imagery.* Communication Studies, Volume 45, pp. 213-224.

GUIGAR, B.J. 2005. *The everything cartooning book.* Avon, Mass: Adams Media.

HARVEY, C.R. 1994. *The Art of the Funnies. An Aesthetic History.* Jackson, Miss: University of Mississippi Press.

HARVEY, C.R. 1996. *The Art of the Comic Book. An Aesthetic History.* Jackson, Miss: University of Mississippi Press.

HARVEY, C.R. 2005. *Describing and Discarding "Comics" as an Impotent Act of Philosophical Rigor*. In *Comics as Philosophy*. Edited by J. McLaughlin. Jackson: University Press of Mississippi. pp. 14-26.

HONEYWILL, P. 1999. *Visual language for the world wide web*. Great Britain, Wiltshire: Cromwell Press.

HORN, R.E. 1998. *Visual Language: Global communication for the 21st century*. Bainbridge Island, Washington: Macro VU Press.

IDDON, J and WILLIAMS, H. 2003. *Memory Booster Workout. How to unlock your mind's potential*. San Diego, California, Thunder Bay Press.

JOHANSON, J.D. 1993. *Dialogue semiosis. An essay on signs and meaning*. Bloomington: Indiana University Press.

KANJEE, A. 1999. *Assessment Research*. In *Research in Practice: Applied methods for social sciences*. Edited by M. Terre Blanche and K. Durrheim. Cape Town: University of Cape Town Press.

KENNEDY, J.M. 1994. *Picture Perception*. In *Advances in Visual Semiotics: The Semiotic Web 1992 – 1993*. Edited by T.A. Sebeok and U.J. Sebeok. Berlin: Walter de Gruyter & Co. pp. 185-216.

KORTE, B. 1997. *Body Language in Literature*. Toronto and Buffalo: University of Toronto Press.

KOSTELNICK, C. 2004. In *Defining Visual Rhetoric's*. Edited by C.A. Hill and M. Helmers. Mahwah, New Jersey: Lawrence Erlbaum Associates, Publishers. pp. 215-242.

KRESS, G. and VAN LEEUWEN, T. 1996. *Reading Images. The Grammar of Visual Design*. New York: Routledge.

KRESS, G. and Van LEEUWEN, T. (2001). *Multimodal discourse: The modes and media of contemporary communication*. Great Britain: Arnold Press.

LANDONI, M. and GIBB, F. 2000. *The role of visual rhetoric in the design and production of electronic books: the visual book. The electronic library*. Volume 18, Number 3, pp. 190-210. MCB University Press. [Online]. Available at < <http://www.emerald-library.com>>. Accessed: 01/11/2006.

LESTER, P.M. 1995. *Digital Literacy: Visual Communication and Computer Images*. [Online]. Available at < <http://www.commfaculty.fullertrton.edu.html>>. Accessed: 02/03/2006.

LESTER, P.M. 2006. *Visual Communication Images with Messages*, Fourth Edition: Wadsworth Publishing.

LOHR, L. 2003. *Creating Graphics for Learning and Performance: Lessons in Visual Literacy*. New Jersey Columbus, Ohio: Merrill Prentice Hall.

LYONS, J. 1970. *Chomsky*. Great Britain: Fontana/Collins

THE MADIBA LEGACY SERIES. 2005. The Nelson Mandela Foundation. Umlando Wezithombe Publishing, [www.umlendo.co.za](http://www.umlendo.co.za).

McCLOUD, S. 1993. *Understanding Comics: The Invisible Art*. New York, NY: Harper Collins.

MESSARIS, P. 1994. *Visual Literacy: Image, Mind, & Reality*. Boulder, Colorado: Westview Press, Inc.

MESSARIS, P. 1997. *Visual Persuasion: The Role of Images in Advertising*. Thousand Oaks: SAGE Publications.

MICROSOFT ® Encarta ® 2007. © 1993-2006 Microsoft Corporation. All rights reserved.

MITCHELL, W.J.T. 1996. *Word and Image. In Critical Terms for Art History*. Edited by NELSON, R.S. and SHIFF, R. Chicago: The University of Chicago Press. pp.47-57.

MORENO, R. and MAYER, R. 2000. *A learner-centered approach to multimedia explanations: Deriving instructional design principles from cognitive theory*. [Online]. Available at <<http://imej.wfu/articles/2000/2/muex.asp>>. Accessed: 25/08/2007.

MORRIS, C. 1938. *Foundations of the Theory of Signs*. Chicago: University of Chicago Press.

MOUTON, J. 2001. *How to Succeed in your Master's and Doctoral Studies: A South African Guide and Resource Book*. Pretoria: Van Schaik Publishers.

NELSON, D.N. 2006. "Hungary." Microsoft® Encarta® 2007 [DVD]. Redmond, WA: Microsoft Corporation.

NEUMAN, W.L. 1997. *Social Research Methods. Qualitative and Quantitative Approaches*. Massachusetts: Allyn & Bacon.

NOBLE, I and BESTLEY, R. 2005. *Visual Research. An introduction to research methodologies in graphic design*. New York: Sterling Publishing Co. Inc.

NUNNALLY, J.C. 1978. *Psychometric theory*. New York: McGraw-Hill.

RAIJMAKERS, L.R. 2004. *Postgraduate Guidelines: Bibliographical Referencing for Theses, Dissertations and Project Reports*. Revised ed, 2004.

RIENZE, G. 1998. *The Evolution of Smarter Dummies*. Research: APL scientists engineer the next generation of crash test dummies. *The Gazette*, Vol 27, Number 40. [Online]. Available at <<http://www.jhu.edu/~gazette/>>. Accessed: 25/08/2006.

SABIN, R. 1993. *Adult Comics: An introduction*. New York: Routledge.

SAINT-MARTIN, F. 1990. *Semiotics in visual language*. Bloomington: Indiana University Press.

SAINT-MARTIN, F. 1994. *Verbal and Visual Semantics*. In *Advances in Visual Semiotics: The Semiotic Web 1992 – 1993*. Edited by T.A Sebeok and J.U. Sebeok. Berlin: Walter de Gruyter & Co.

SANTOS, J.R.A. 1999. *Cronbach's Alpha: A Tool for Assessing the Reliability of Scales*. *Journal of Extension*, April 1999, Volume 37, Number 2. [Online]. Available at <<http://www.joe.org/joe/1999April/tt3.html>>. Accessed: 10/09/2007.

SARACENI, M. 2003. *The Language of Comics*. London: Routledge.

SAUNDERS, A.C. 1994. *Graphics and how they communicate*. In *Visual Literacy, a spectrum of visual learning*. Edited by D.M. Moore and F.M. Dwyer. Englewood Cliffs, NJ: Educational Technology.

SINATRA, R. 1986. *Visual Literacy connections to thinking, reading and writing*. Springfield Ill. USA: Thomas.

SKAALID, B. 1999. *Gestalt Principles of Perception*. [Online]. Available at <<http://www.usask.ca/education/coursework/skaalid/theory/gestalt/gestalt.htm>>. Accessed: 03/07/2006.

SUPA STRIKAS. 2006. Issue 42/43/45. In *The Sunday Times (Distribution)*. Woodstock, Cape Town: Strika Entertainment. [www.supastrikas.co.za](http://www.supastrikas.co.za)

THE CASSEL DICTIONARY. 1998. Kent, London: Mackeys of Chatham.

THIBAULT, M. and WALBERT, D. 2003. *Reading Images: an introduction to visual literacy*. [Online]. Available at <<http://www.learnnc.org/Index.nsf.doc.vlintro0602?OpenDocument>>. Accessed: 28/02/2006.

TORRANS, C. 1999. *Gestalt and Instructional Design*. [Online]. Available at <<http://chd.gse.gmu.edu/immersion/knowledgebase/strategies/cognitivism/gestalt/gestalt.htm>>. Accessed: 03/07/2006.

VARNUM, R and GIBBONS, C.T. 2001. *The Language of Comics: Word and Image*. Mississippi: University Press of Mississippi.

VAN DER MEIJ, B. 2005. *Meet the Dummies*. Netherlands: Comic House Netherlands.

VUT (Vaal University of Technology). 2007. Citing electronic sources of information. [Online]. Available at: <<http://www.vut.ac.za>>. Accessed: 03/03/2007.

WHITE, R. 2004. *Comics in the class room. Learn NC*. The North Carolina Teacher's Network. [Online]. Available at <<http://www.learnnc.org/Index.nsf/printView>>. Accessed: 08/12/2005.

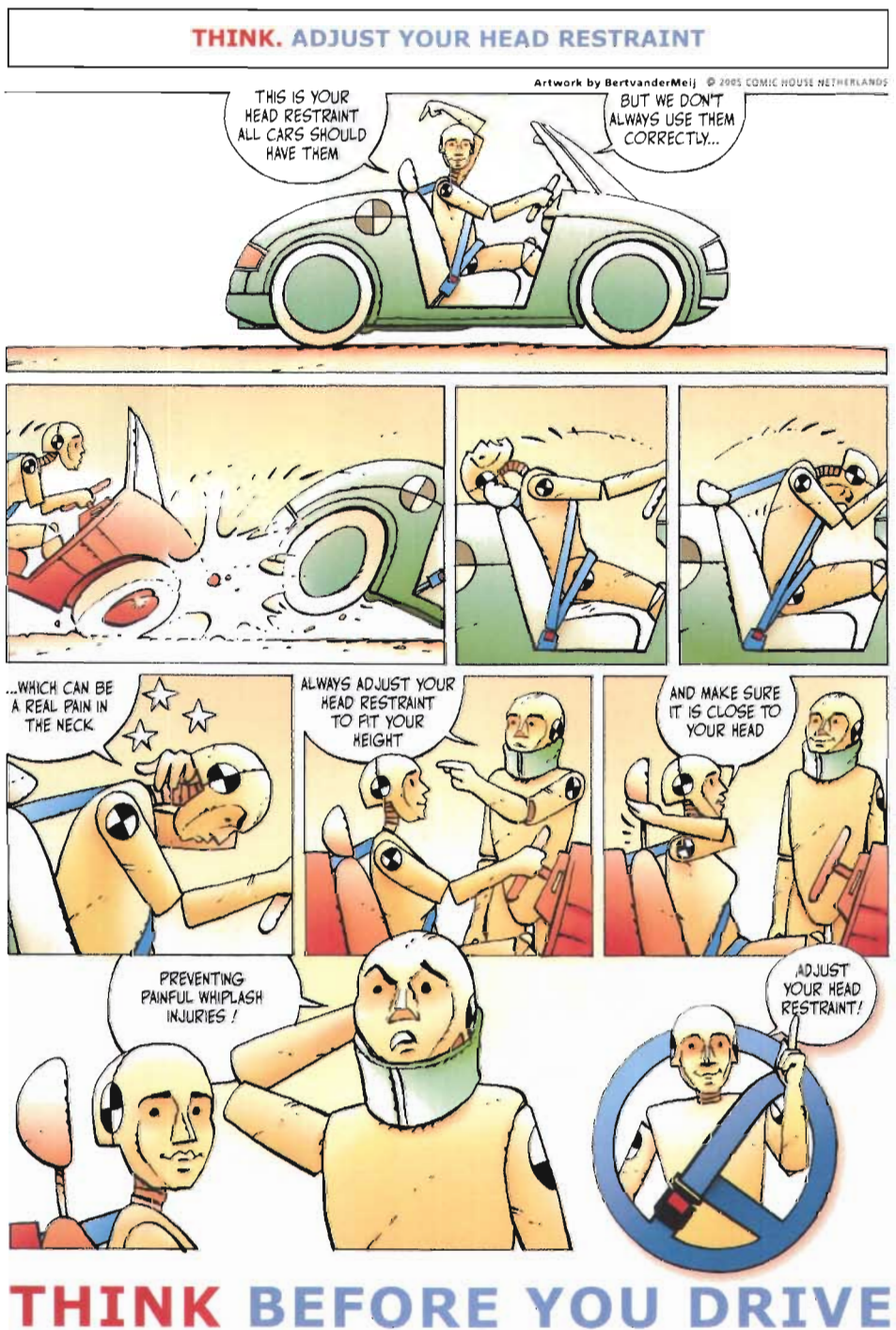


WILEMAN, R.E. 1993. *Visual Communicating*. New Jersey: Englewood Cliffs Educational Technology Publications.

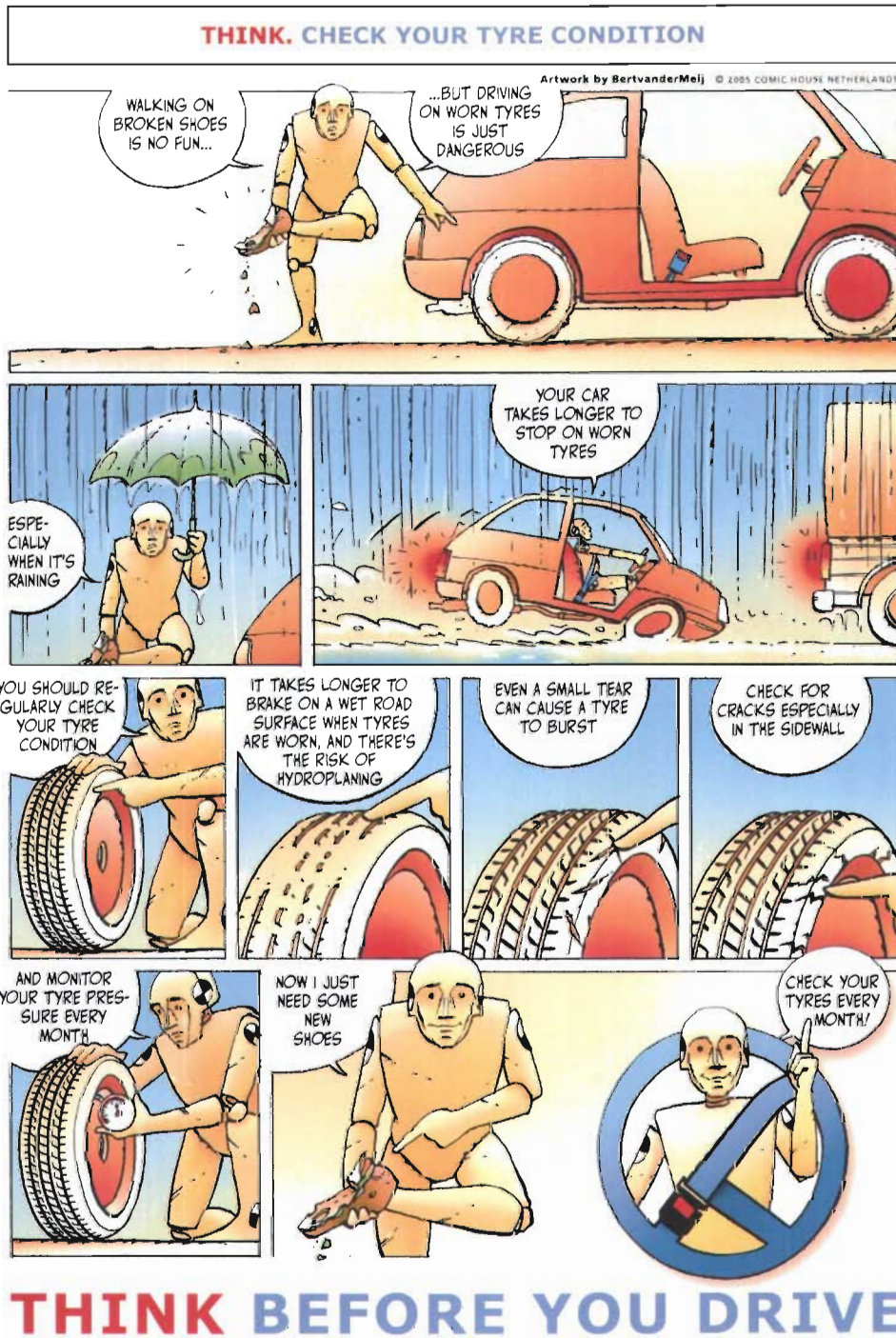
ZAKIA, R.D. 2002. *Perception & Imaging*. Woburn, MA: Focal Press.

# APPENDICES

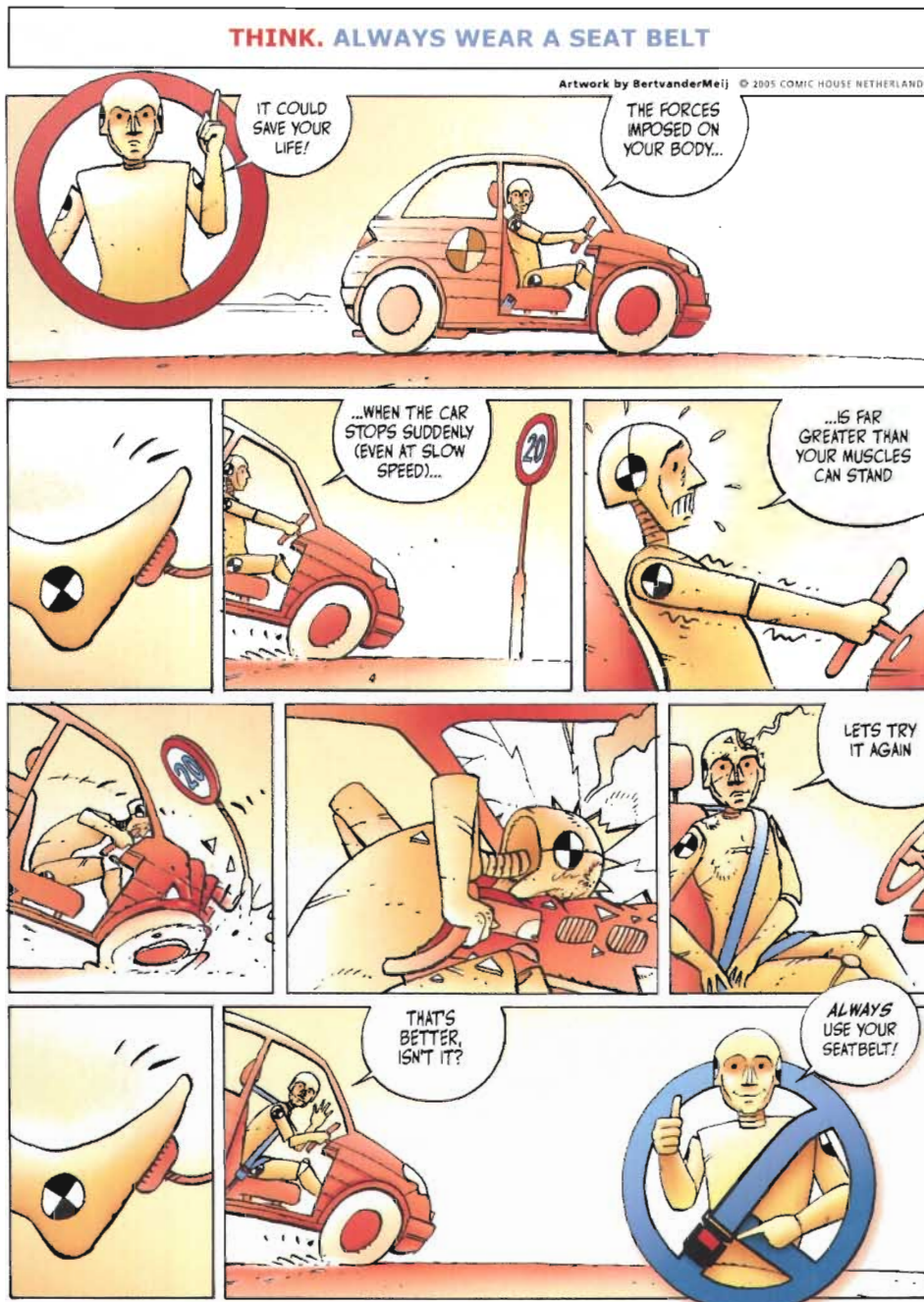
Appendix A: Figure 1. Meet the Dummies (English version)



Appendix A: Figure 2. Meet the Dummies (English version)

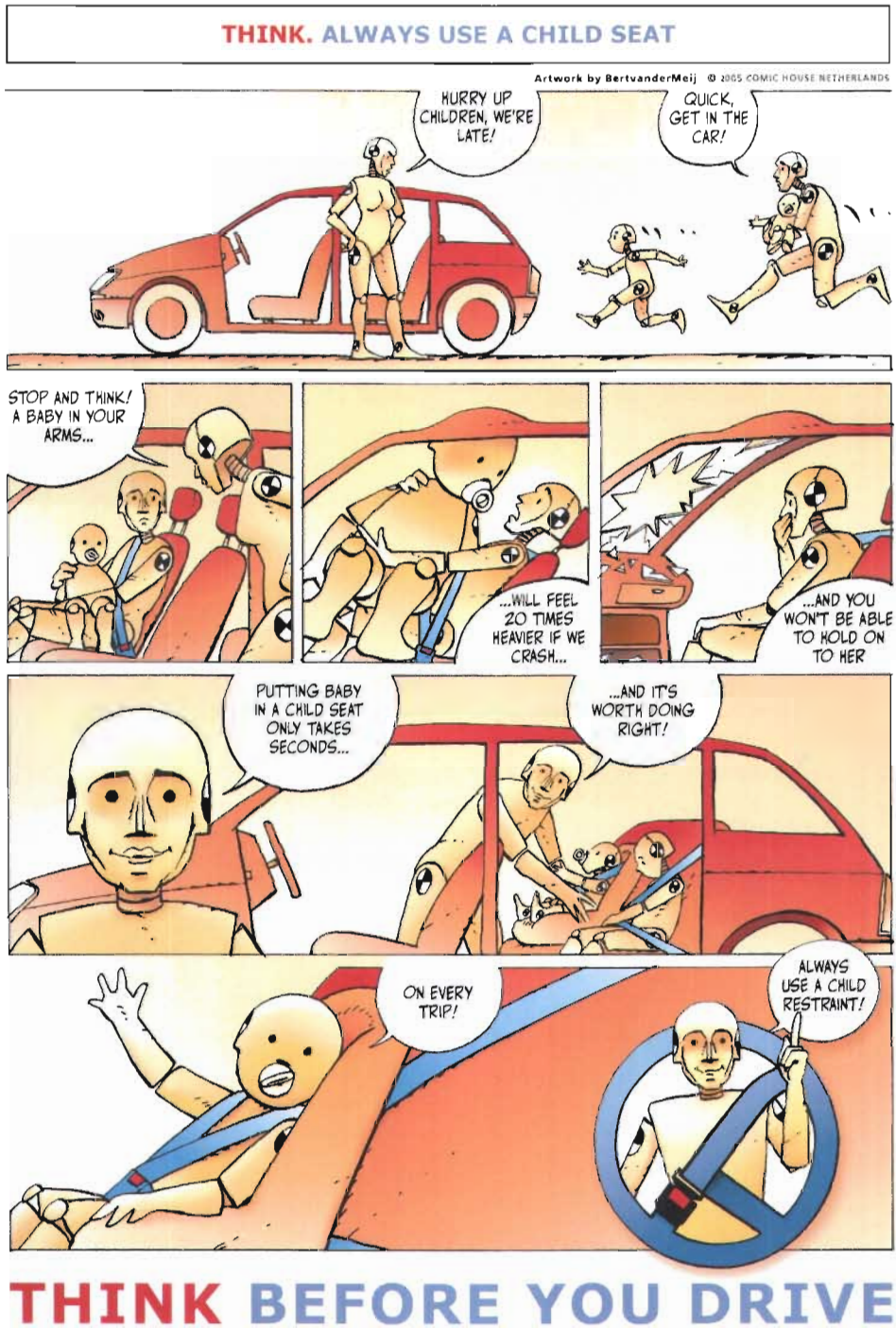


Appendix A: Figure 3. Meet the Dummies (English version)



**THINK BEFORE YOU DRIVE**

Appendix A: Figure 4. Meet the Dummies (English version)



Appendix A: Figure 1. Meet the Dummies (Magyar version)

**GONDALKODJON. ÁLLÍTSA BE FEJTÁMLÁJÁT**

Artwork by BertvanderMeij © 2005 COMIC HOUSE NETHERLANDS

EZ AZ ÖN FEJTÁMLÁJA, MELLYEL MINDEN AUTÓ EL KELL LEGYEN LÁTVA.

ÁM NEM MINDIG HASZNÁLJUK MEGFELELŐEN...

...EZ PEDIG IGAZI NYAK-FAJDALOM OKOZÓJA LEHET

MINDIG ÁLLÍTSA BE ÚGY A FEJTÁMLÁT, HOGY AZ ÖN MAGASSÁGAHOZ MERTEN MEGFELELŐEN HELYEKEDJÉK EL.

ÉS GYŐZŐDJÖN MEG, HOGY KÖZEL VAN A FEJÉHEZ

ELKERÜLVE EZÁLTAL A KOMOLY NYAKCSIGÓLYA-SÉRÜLÉSEKET!

ÁLLÍTSA BE FEJTÁMLÁJÁT!

**GONDALKODJON MIELŐTT VEZET**

Appendix A: Figure 2. Meet the Dummies (Magyar version)

**GONDOLKODJON. VIZSGÁLJA MEG A KEREKEK ÁLLAPOTÁT**

Artwork by BertvanderMeij © 2005 COMIX HOLLAND NETHERLANDS

SZAKADT CIPŐBEN JÁRNI! EGYÁLTALAN NEM SZÓRAKOZTATO...

... ÁM KOPOTT ABRONCSOKKAL AUTÓZNI KIFEJZETTEN VESZÉLYES

KÜLÖNÖSEN, HA ESIK AZ ESŐ

KOPOTT ABRONCSOKKAL AUTÓJA FÉKTÁVOLSÁGA HOSSZABB

RENDSZERESEN ELLENŐRIZNIE KELL AZ ABRONCSOK ÁLLAPOTÁT

KOPOTT ABRONCSOKKAL VIZES ÚTTESTEN MEGNŐ A FÉKTÁVOLSÁG ÉS FENNÁLL AZ VÍZEN CSÚSZÁS VESZÉLYE

A LEGAPRÓBB HASADÁS IS AZ ABRONCS SZÉTROBBANÁSÁHOZ VEZETHET

ELLENŐRIZZE A REPEDÉSEKET, KÜLÖNÖS TEKINTETTEL AZ ABRONCS OLDALFALÁRA

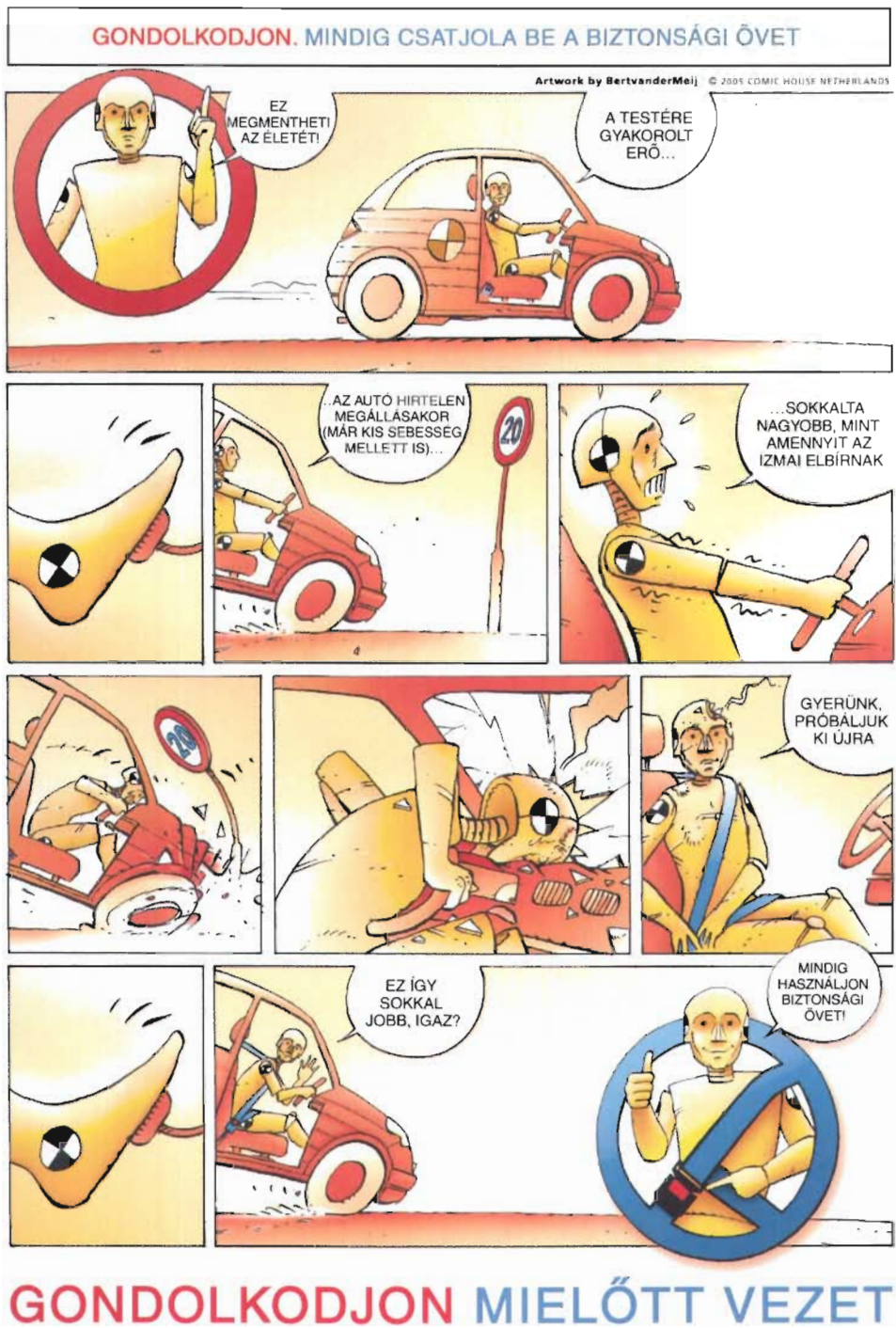
ÉS HAVONTA MÉRJE MEG AZ ABRONCSOKBAN LÉVŐ NYOMÁST

MOST MÁR MINDÖSSZE EGY PÁR ÚJ CIPŐRE VAN SZÜKSÉGEM

MINDEN HÓNAPBAN ELLENŐRIZZE ABRONCSAI ÁLLAPOTÁT!

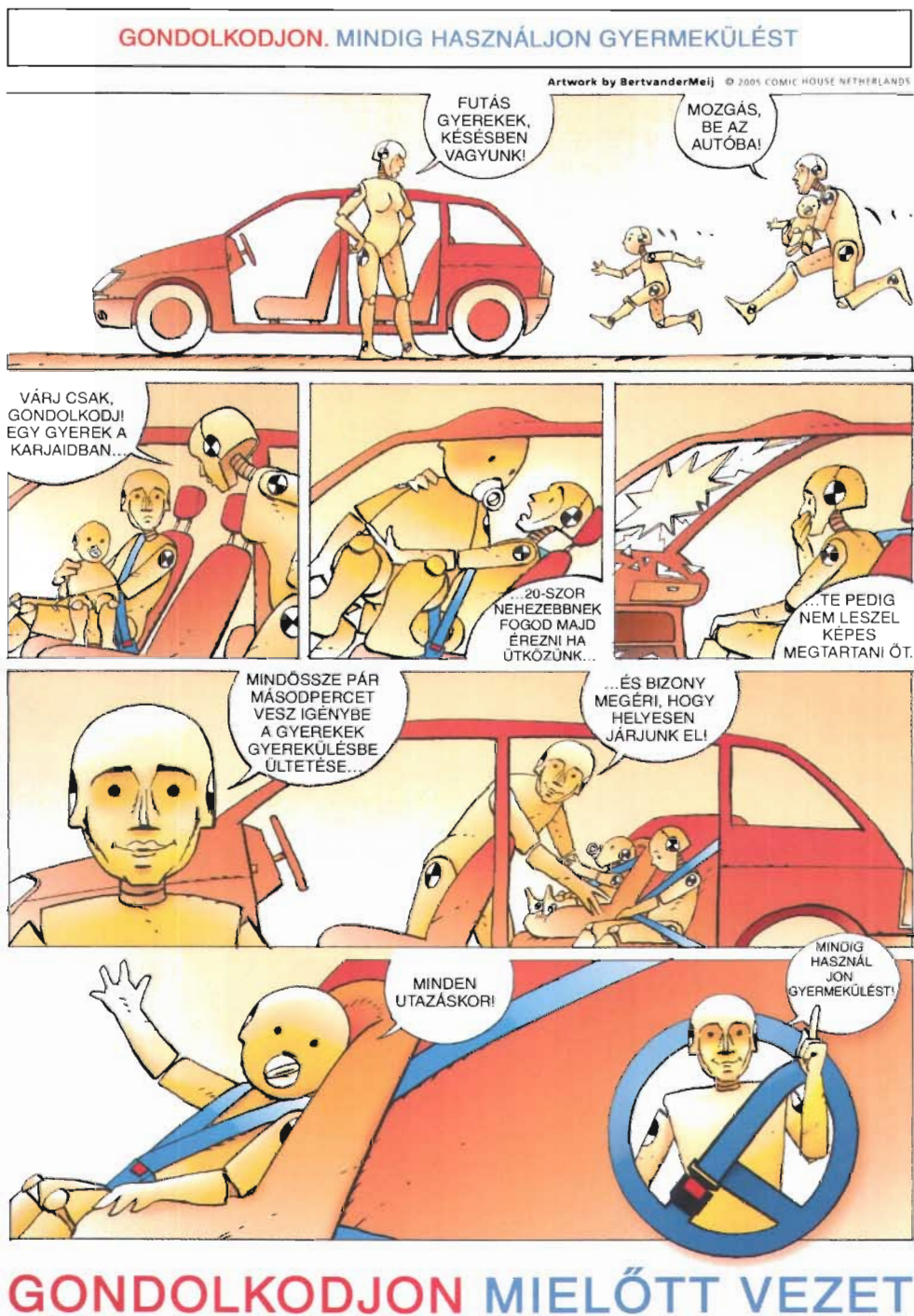
**GONDOLKODJON MIELŐTT VEZET**

Appendix A: Figure 3. Meet the Dummies (Magyar version)

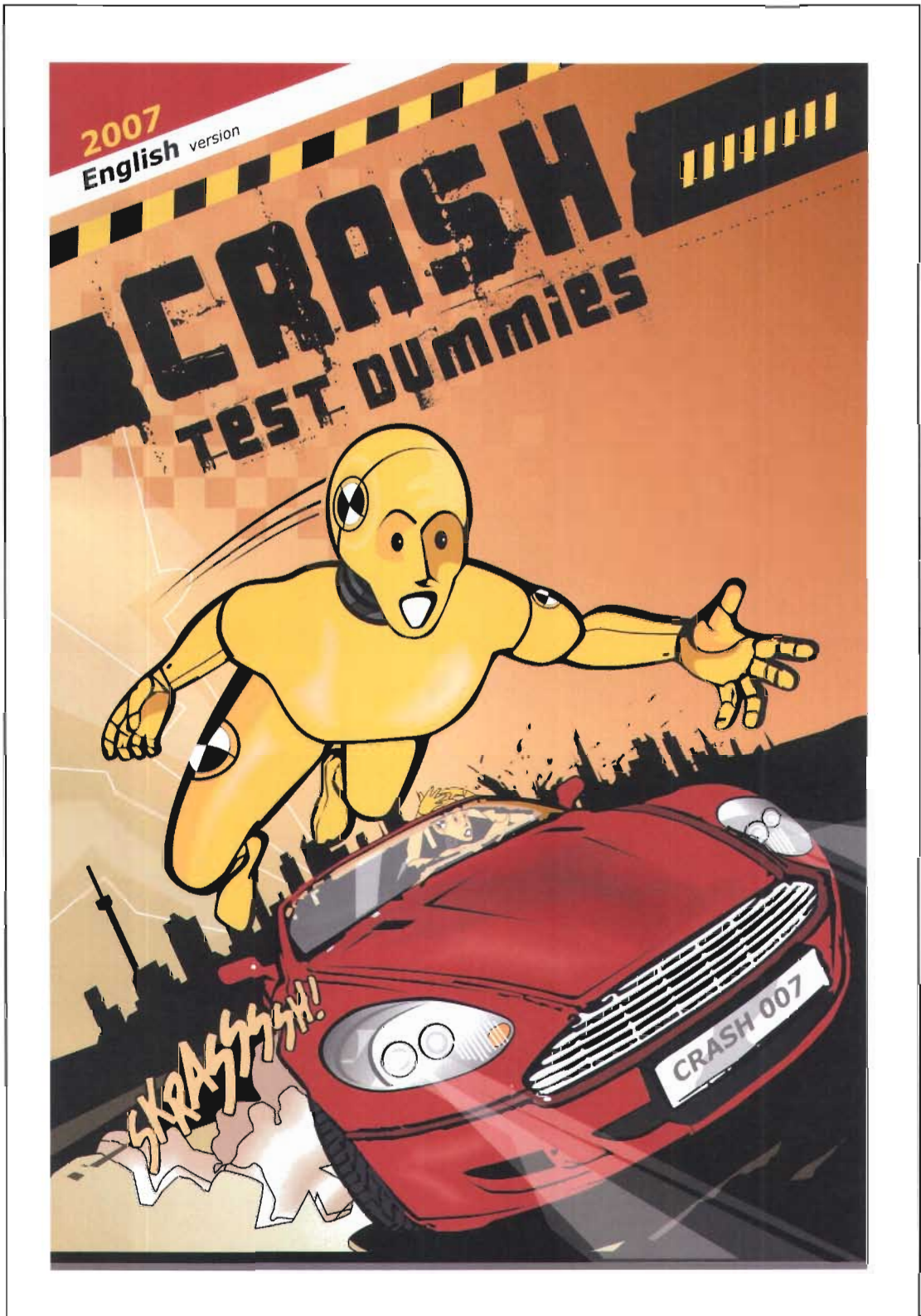




Appendix A: Figure 4. Meet the Dummies (Magyar version)



Appendix B: Test visuals, Crash Test Dummies (English version) Cover



## Appendix B: English version, page 1

*Good day. My name is Ernest van der Merwe. I am from the Vaal University of Technology. I am carrying out research on the relationship between images and text in a comic book setting.*

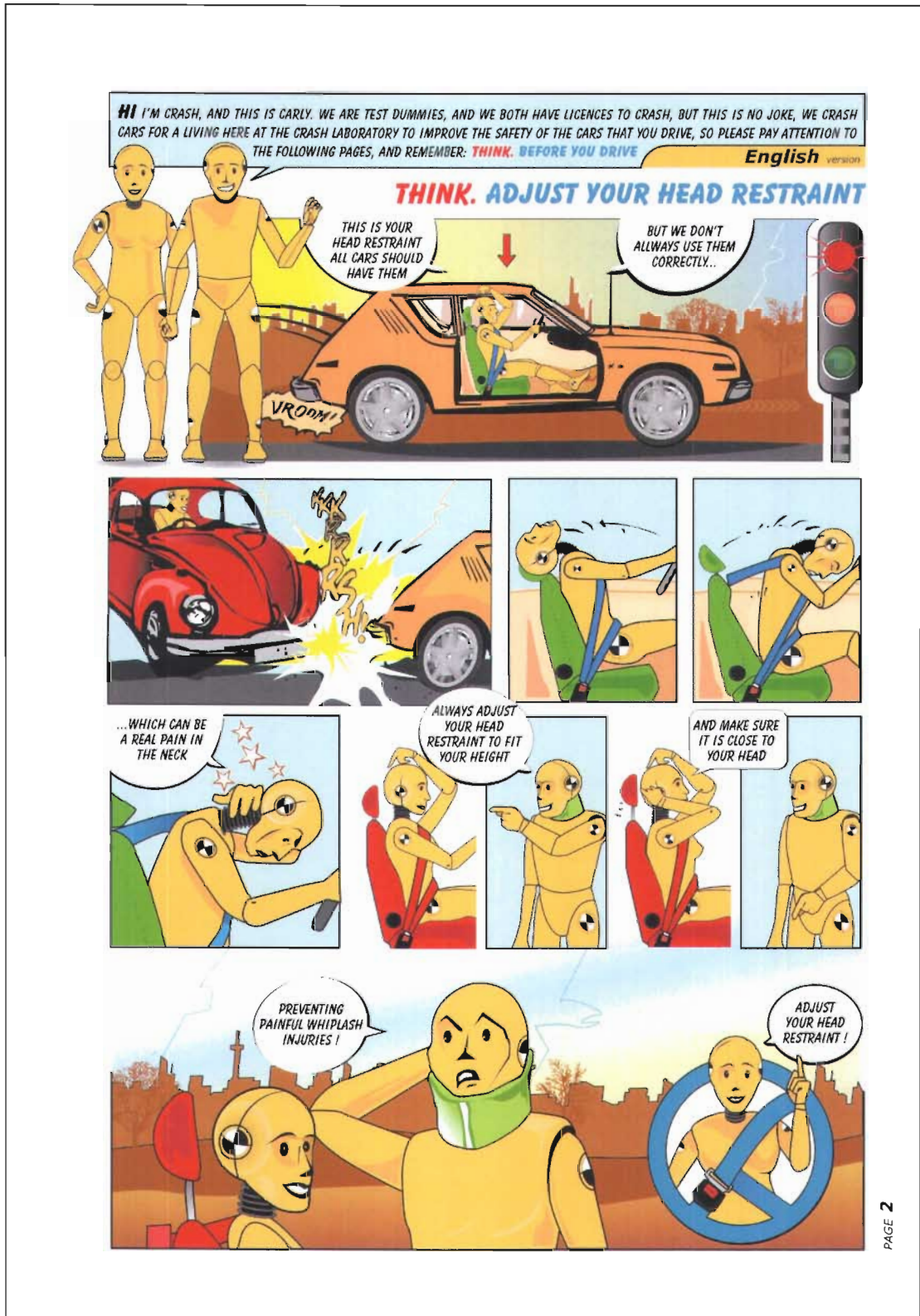
*Please examine the following pages of the comic book carefully and answer the subsequent questions on the supplied document marked "**Questionnaire on the Crash Test Dummies Comic Book**". Please note that if you received a copy of the comic book in a foreign language, it is totally intentional and forms part of the research. You are nevertheless encouraged to complete the questionnaire and indicate what sense you make from the comic book. Feel free to ask questions if you are unclear about anything you read.*

*Please also note the following:*

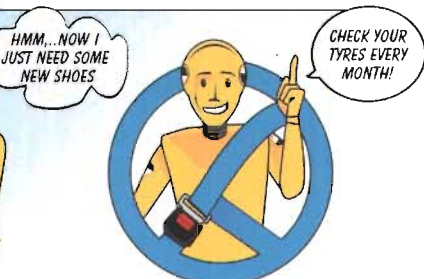
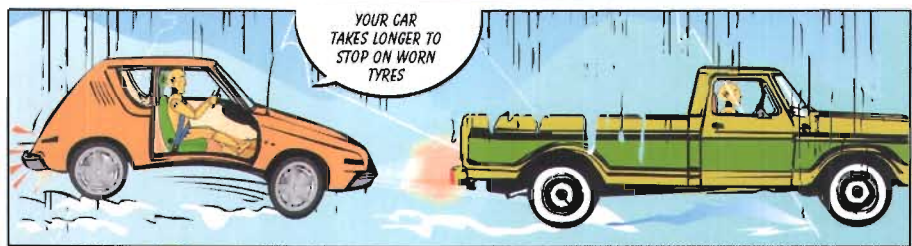
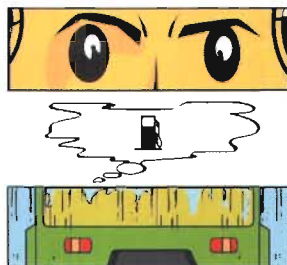
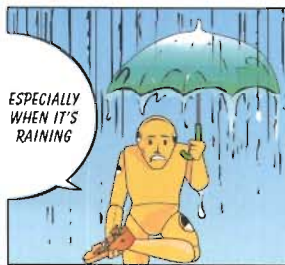
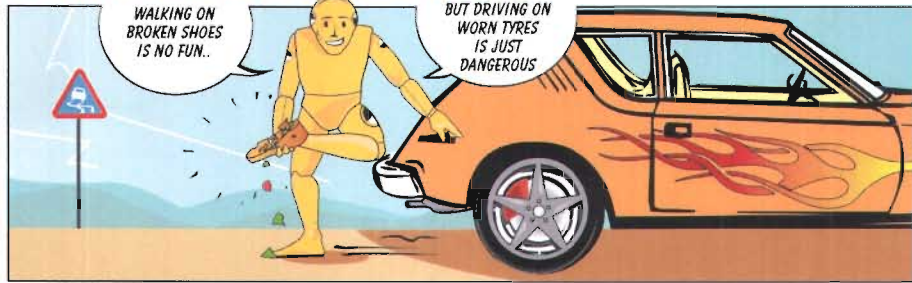
- Your participation in this research is voluntary and your responses are anonymous.*
- All responses will be handled according to the research code of ethics of the VUT.*
- Any information you disclose will be kept confidential.*

*This particular comic book contains **English** as the chosen language.*

*If you require any further information about the research project please contact  
Prof. Rolf J. Gaede at Private Bag X021, Vanderbijlpark, 1900, South Africa  
Tel: +27 16 950 9973; Fax: +27 16 950 9789 or rolf@vut.ac.za*



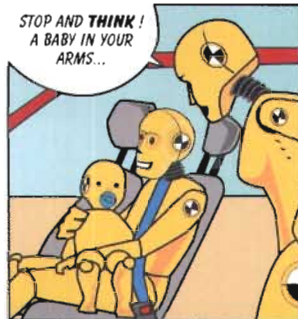
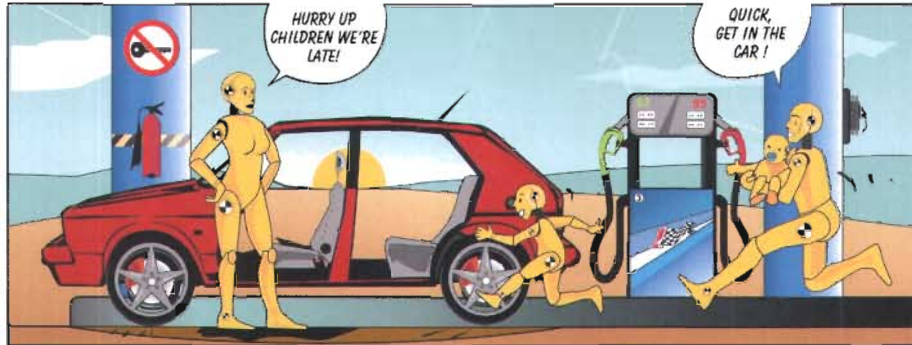
**THINK. CHECK YOUR TYRE CONDITION**



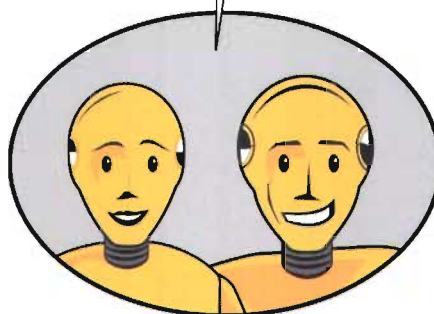
**THINK. ALWAYS WEAR A SEATBELT**



**THINK. ALWAYS USE A CHILD SEAT**



*Thank you for your participation and time.*







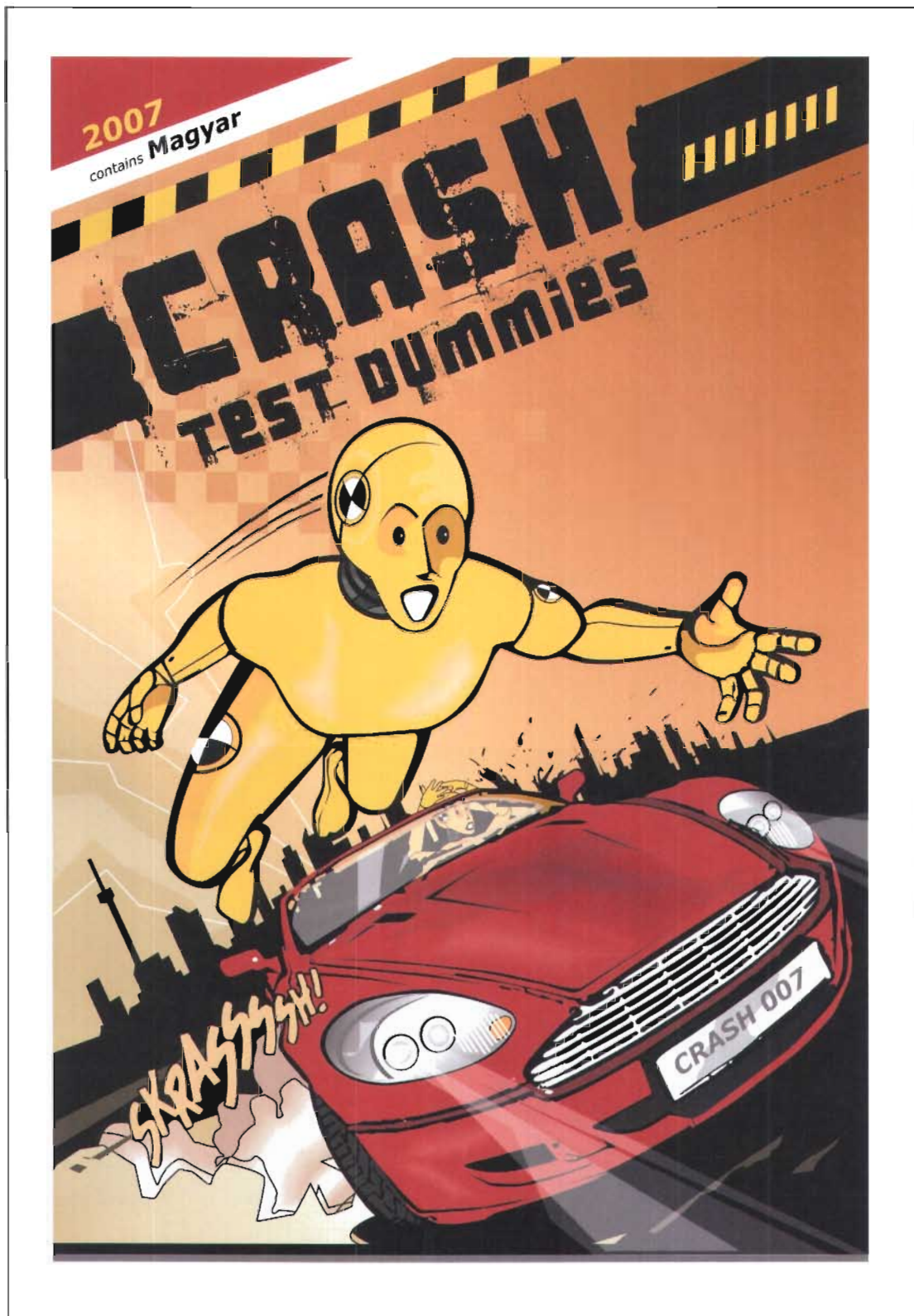
### **The Origin of Crash Test Dummies**

"The first anthropomorphic crash test dummy was invented in 1949 for the U.S. Air Force in order to evaluate aircraft ejection seats. Since the late 1950s, crash test dummies have been used by the automobile industry to determine the extent of human injury during a crash so that modifications can be made to automobile design to enhance passenger safety. The injury data is recorded by mechanical sensors inside the dummy, which are connected to wires that come out its back like an umbilical cord, which is in turn attached to a computer. Black and yellow stickers\* on the side of the head and body are used as a reference point so that special cameras can record the motion of the dummy."

Greg Rienzi  
The Evolution Of Smarter Dummies. Research: APL scientists engineer the next generation of crash test dummies. *The Gazette* (The newspaper of The Johns Hopkins University), July 20, 1998, Vol. 27, No. 40

 Black and yellow (or white) stickers\*

Appendix B: Test visuals, Crash Test Dummies (Magyar version) Cover



## Appendix B: Magyar version, page 1

Good day. My name is Ernest van der Merwe. I am from the Vaal University of Technology. I am carrying out research on the relationship between images and text in a comic book setting.

Please examine the following pages of the comic book carefully and answer the subsequent questions on the supplied document marked "**Questionnaire on the Crash Test Dummies Comic Book**". Please note that if you received a copy of the comic book in a foreign language, it is totally intentional and forms part of the research. You are nevertheless encouraged to complete the questionnaire and indicate what sense you make from the comic book. An English version of the comic book will be made available afterwards for anyone who is interested. Feel free to ask questions if you are unclear about anything you read.

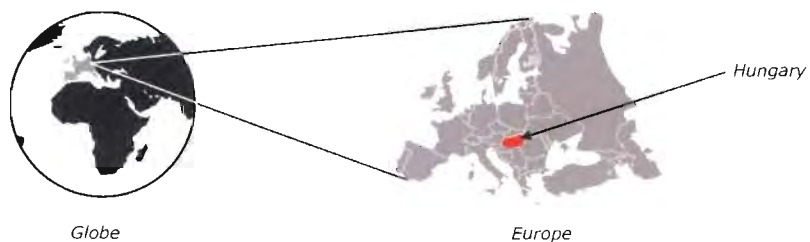
Please also note the following:

- Your participation in this research is voluntary and your responses are anonymous.
- All responses will be handled according to the research code of ethics of the VUT.
- Any information you disclose will be kept confidential.

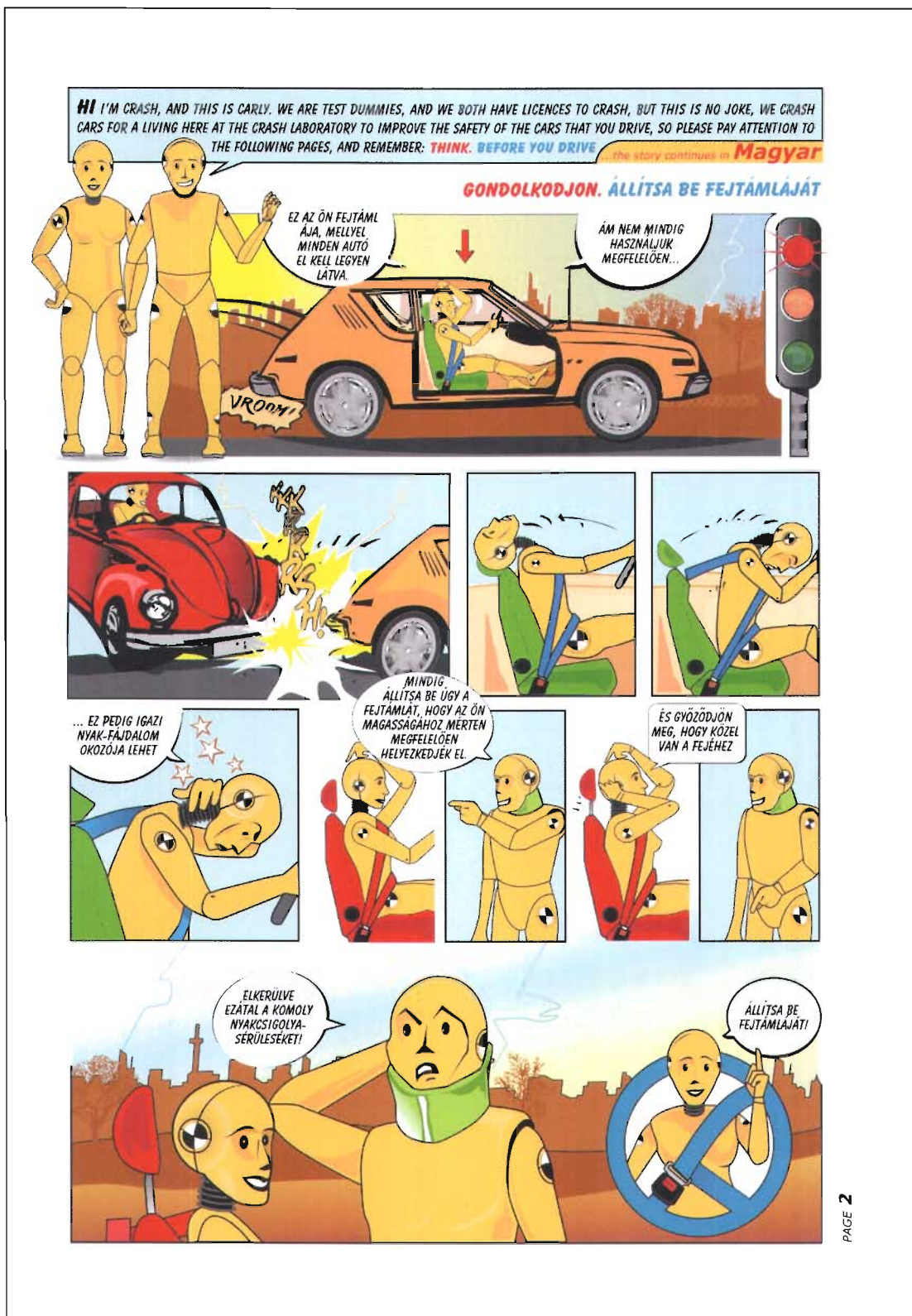
This particular comic book contains **Magyar** as the chosen language.

"Hungarian, also called Magyar, is the official language of Hungary. It is completely unrelated to any of the major European languages of the Indo-European language family. Its only major relatives in Europe are Finnish and Estonian. The Hungarian Language has been influenced by a number of other languages, including Turkish, German, Latin, French, and several Slavic languages."


NELSON, D.N. 2006. "Hungary." Microsoft® Encarta® 2007 [DVD]. Redmond, WA: Microsoft Corporation. Microsoft® Encarta® 2007. © 1993-2006 Microsoft Corporation. All rights reserved.



If you require any further information about the research project please contact  
Prof. Rolf J. Gaede at Private Bag X021, Vanderbijlpark, 1900, South Africa  
Tel: +27 16 950 9973; Fax: +27 16 950 9789 or rolf@vut.ac.za




**GONDOLKODJON. VIZSGÁLJA MEG A KEREKEK ÁLLAPOTÁT**







SZAKADT CIPŐBEN JÁRNI EGYÁLTALÁN NEM SZÓRAKOZTATÓ...


...AM KOPOTT ABRONCSOKKAL AUTOZNI KIFEJEZETTEN VESZÉLYES




KÜLÖNÖSEN HA ESİK AZ ESŐ




KOPOTT ABRONCSOKKAL AUTÓJA FÉKTÁVOLSÁGA HOSSZABB




RENDSZERESEN ELLNÖRIZNIE KELL AZ ABRONCSOK ÁLLAPOTÁT




KOPOTT ABRONCSOKKAL VIZES ÚTTESTEN MEGNŐ A FÉKTÁVOLSÁG ÉS FENNÁLL AZ VIZEN GSÚSZÁS VESZÉLYE



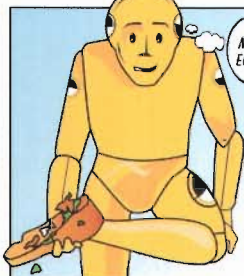
A LEGPRÓBB HASADÁS IS AZ ABRONCS SZETROBBANÁSAHOZ VEZETHET




ELLENŐRIZZE A REPEDÉSEKET KÜLÖNÖS TEKINTETTEL AZ ABRONCS OLDALFALÁRA



ÉS HAVONTA MÉRJE MEG AZ ABRONCSOKBAN LÉVŐ NYOMÁST



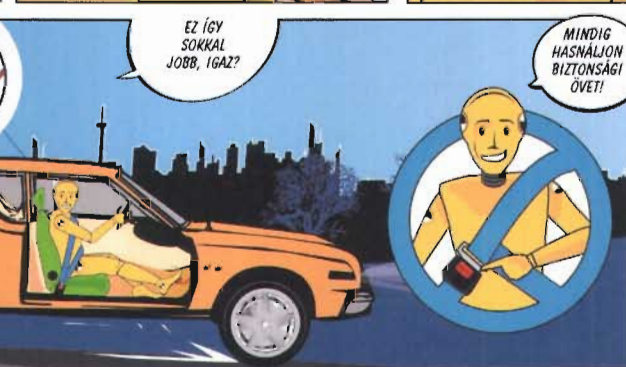
MOST MÁR MINDÖSSZE EGY PAR ÚJ CIPŐRE VAN SZÜKSÉGEM



MINDEN HÓNAPBAN ELLENŐRIZZE ABRONCSAI ÁLLAPOTÁT!

PAGE 3

**GONDOLKODJON. MINDIG CSATJOLA BE A BIZTONSÁGI ÖVET**



**GONDOLKODJON. MINDIG HASZNÁLJON GYERMEKÜLÉST**

FUTAS GYEREKEK, KÉSÉSBEN VAGYUNK!

MOZGÁS, BE AZ AUTÓBA!

VÁRJ CSAK, GONDOLKODJ! EGY GYERKEK A KARJAIDBAN...

...20-SZOR NEHEZEBBNEK FOGOD MAJD ÉREZNI HA ÜTKÖZÜNK...

...TE PEDIG NEM LESZEL KÉPES MEGTARTANI ÖT.

MINDÖSSZE PÁR MÁSODPERCET VESZ IGENYBE A GYEREKEK GYERMEKÜLÉSBE ÜLTETÉSE...

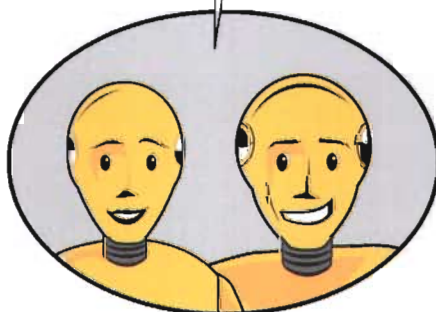
...ÉS BIZONY MEGÉRI, HOGY HELYESEN JÁRJUNK ELI!

MINDEN UTAZÁSKOR!

MINDIG HASZNÁLJON GYERMEKÜLÉST!

PAGE 5

*Thank you for your participation and time.*







### **The Origin of Crash Test Dummies**

"The first anthropomorphic crash test dummy was invented in 1949 for the U.S. Air Force in order to evaluate aircraft ejection seats. Since the late 1950s, crash test dummies have been used by the automobile industry to determine the extent of human injury during a crash so that modifications can be made to automobile design to enhance passenger safety. The injury data is recorded by mechanical sensors inside the dummy, which are connected by wires that come out its back like an umbilical cord, which is in turn attached to a computer. Black and yellow stickers\* on the side of the head and body are used as a reference point so that special cameras can record the motion of the dummy."

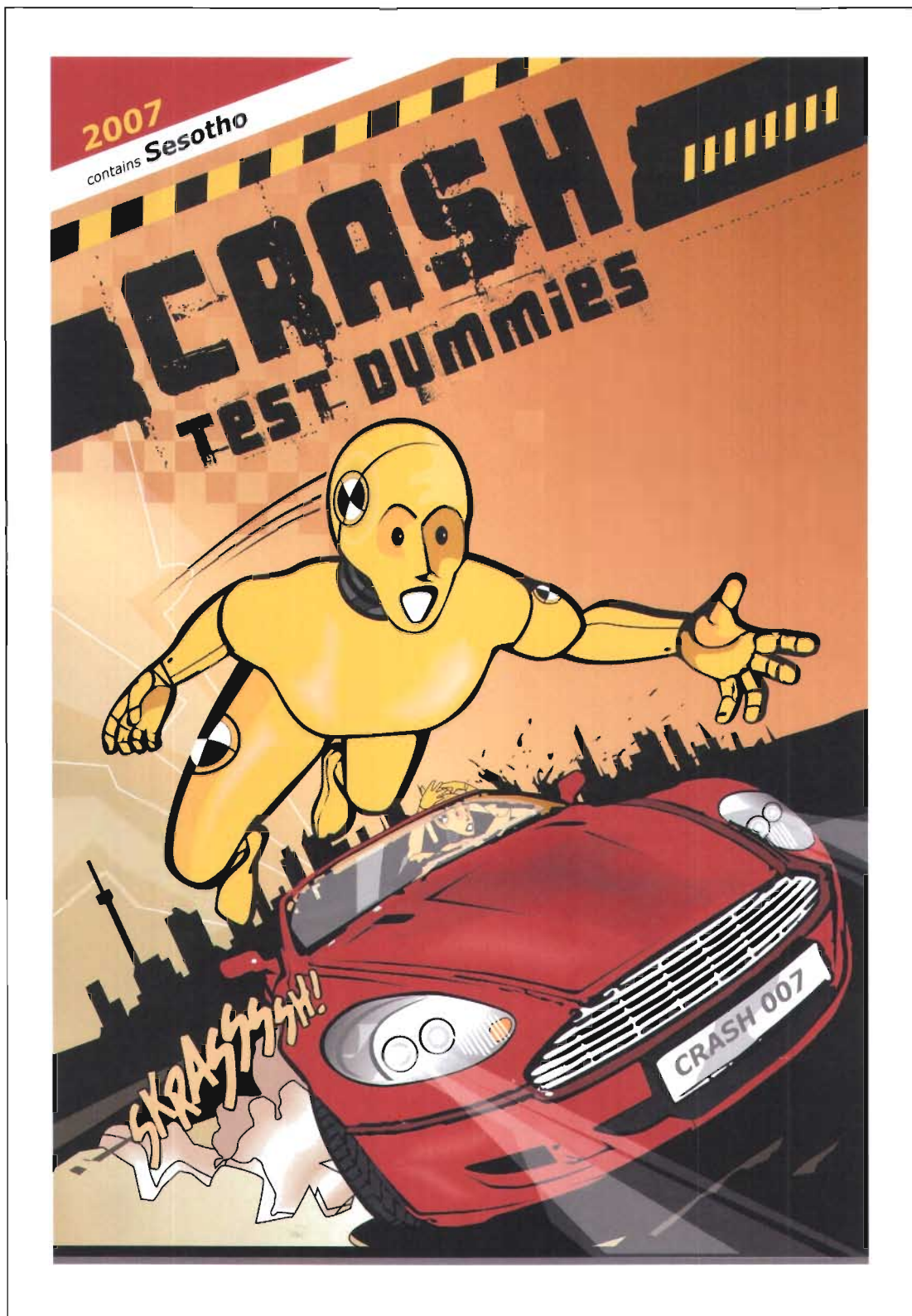
*Greg Rienzi*

The Evolution Of Smarter Dummies. *Research: APL scientists engineer the next generation of crash test dummies. The Gazette (The newspaper of The Johns Hopkins University), July 20, 1998, Vol. 27, No. 40*



Black and yellow (or white) stickers\*

Appendix B: Test visuals, Crash Test Dummies (Sesotho version) Cover



## Appendix B: Sesotho version, page 1

*Good day. My name is Ernest van der Merwe. I am from the Vaal University of Technology. I am carrying out research on the relationship between images and text in a comic book setting.*

*Please examine the following pages of the comic book carefully and answer the subsequent questions on the supplied document marked "**Questionnaire on the Crash Test Dummies Comic Book**". Please note that if you received a copy of the comic book in a foreign language, it is totally intentional and forms part of the research. You are nevertheless encouraged to complete the questionnaire and indicate what sense you make from the comic book. An English version of the comic book will be made available afterwards for anyone who is interested. Feel free to ask questions if you are unclear about anything you read.*

*Please also note the following:*

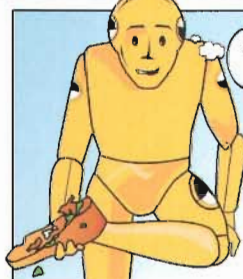
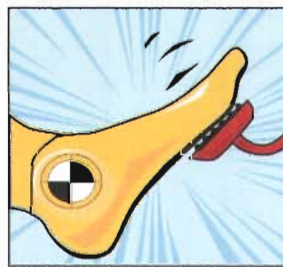
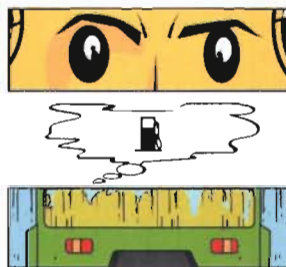
- Your participation in this research is voluntary and your responses are anonymous.*
- All responses will be handled according to the research code of ethics of the VUT.*
- Any information you disclose will be kept confidential.*

*This particular comic book contains **Sesotho** as the chosen language.*

*If you require any further information about the research project please contact  
Prof. Rolf J. Gaede at Private Bag X021, Vanderbijlpark, 1900, South Africa  
Tel: +27 16 950 9973; Fax: +27 16 950 9789 or rolf@vut.ac.za*



**NAHANA. SHEBA MAOTWANA SEEMO SA ONA**



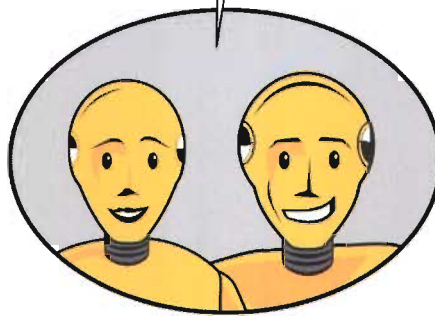
### NAHANA. APARA LEBANTA LA HAO KAMEHLA



### NAHANA. KAMEHLA SEBEDISA SETULO SA BANA



*Thank you for your participation and time.*







### **The Origin of Crash Test Dummies**

*"The first anthropomorphic crash test dummy was invented in 1949 for the U.S. Air Force in order to evaluate aircraft ejection seats. Since the late 1950s, crash test dummies have been used by the automobile industry to determine the extent of human injury during a crash so that modifications can be made to automobile design to enhance passenger safety. The injury data is recorded by mechanical sensors inside the dummy, which are connected to wires that come out its back like an umbilical cord, which is in turn attached to a computer. Black and yellow stickers\* on the side of the head and body are used as a reference point so that special cameras can record the motion of the dummy."*

*Greg Rienzi*

*The Evolution Of Smarter Dummies. Research: APL scientists engineer the next generation of crash test dummies. The Gazette (The newspaper of The Johns Hopkins University), July 20, 1998, Vol. 27, No. 40*



*Black and yellow (or white) stickers\**

## Appendix C: Questionnaire



# Vaal University of Technology

PVT BAG X021 VANDERBIJLPARK 1900  
Tel: +27 16 950 9973 Fax: +27 16 950 9789

## QUESTIONNAIRE ON THE CRASH TEST DUMMIES COMIC BOOK

Instructions: Please answer the following questions by marking the appropriate answer(s) with an X and by providing relevant information where required.

Please note the following:

- Your participation in this research is voluntary and your responses are anonymous.
- All responses will be handled according to the research code of ethics of the VUT.
- Any information you disclose will be kept confidential.

### DEMOGRAPHIC QUESTIONS

Q.1 Please indicate your gender?

Male	
Female	

Q.2 Please indicate your age?

---

Q.3 What course did you enrol for at the university?

---

Q.4 Please indicate your first year of enrolment?

---

Q.5 What is your primary home language?

English	
Sesotho	
Magyar	
Zulu	
Other. Please Specify:	

Comments:

--

**Q.6** What is your second language?

English	
Sesotho	
Zulu	
Magyar	
None	
Other. Please Specify:	

Comments:

--

**Q.7** What other languages can you read?

Please Specify:
Please Specify:
Please Specify:

Comments:

--

**Q.8** What is the language of the comic book that you received?

English	
Sesotho	
Magyar	

Comments:

--

**Q.9** As the comic book deals with road safety, please indicate whether you have a drivers licence:

Yes	
No	

Comments:

--

**COMIC BOOK RELATED QUESTIONS**

**Q.10** What does the following sign stand for? Please mark one option.



*\*Sign can be found on page 5 of the comic book.*

A	No keys allowed.	
B	No metal objects allowed.	
C	The solution does not exist.	
D	Please turn automobile engine off.	
E	None of the above.	

Comments:

**Q.11** What happened after this scene? Please mark one option.



*\* Panel can be found on page 3 of the comic book.*

A	The crash test dummy looked at his tyres.	
B	The car on the left stopped in time.	
C	The car on the left hooted and flashed its lights at the jeep on the right to indicate to driver to accelerate.	
D	The car on the left drove into the jeep on the right because of its worn tyres.	
E	None of the above.	

Comments:

**Q.12 What happened in this scene? Please mark one option.**



*\* Panel can be found on page 5 of the comic book.*

A	A stone was thrown through the windscreen.	
B	The baby went flying through the windscreen.	
C	The female dummy explained what could happen if the car came to a sudden stop with the baby in the arms of the male dummy.	
D	There was a huge accident.	
E	None of the above.	

Comments:

**Q.13 What do the stars indicate in this panel? Please mark one option.**

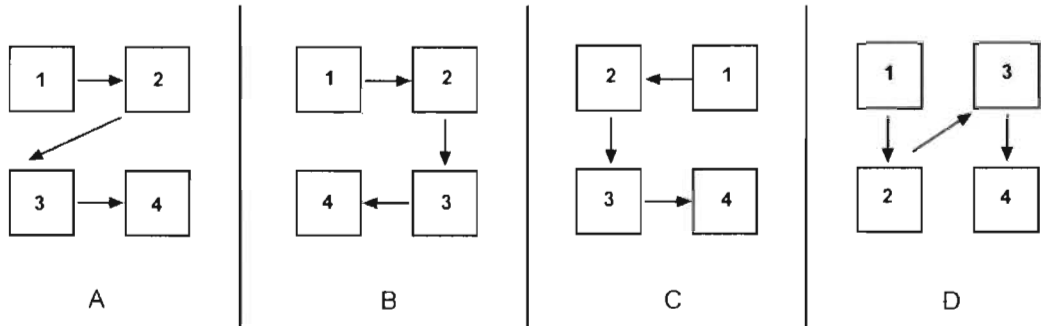


*\* Panel can be found on page 2 of the comic book.*

A	Happiness	
B	Fireworks	
C	Confusion	
D	Euphoria	
E	Pain	

Comments:

Q.14 In which sequence is one supposed to look at the panels on a page of the comic book?



A		
B		
C		
D		
E	None of the above	

Comments:

Q.15 What do the following signs mean?



A



B



C

*\*Sign C can be found on page 4 of the comic book.*

A	
B	
C	

Comments:

**Q.16** What did the dummy say in this panel? Please mark one option.

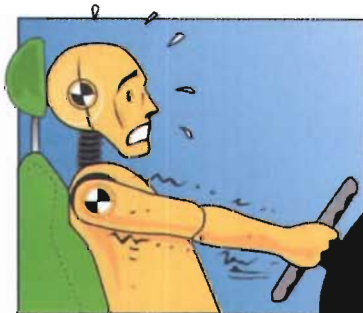


\* Panel can be found on page 4 of the comic book.

A	That was fun.	
B	I smell smoke.	
C	My head hurts!	
D	Let's try that again.	
E	None of the above.	

Comments:

**Q.17** Please describe what this panel illustrates?



\* Panel can be found on page 4 of the comic book.

---



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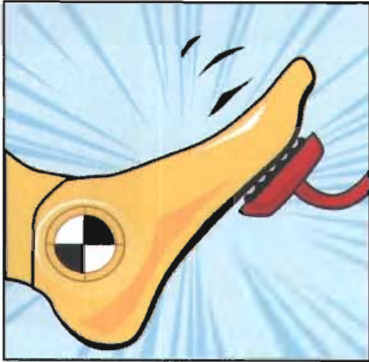
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Comments:

Q.18 What does this scene show? Please mark one option.

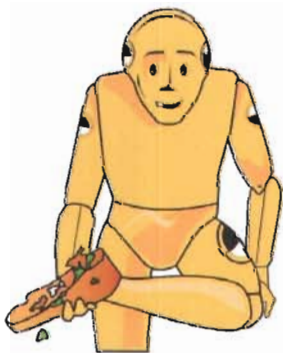


\* Panel can be found on page 3 of the comic book.

A	The dummy is applying pressure on the clutch pedal.	
B	The dummy is pressing down on the accelerator pedal.	
C	The dummy is pressing down on the brake pedal.	
D	The dummy has a pain in the foot.	
E	None of the above	

Comments:

Q.19 In this panel, what does the test dummy compare the tread of the shoes to?



\* Panel can be found on page 3 of the comic book.

---



---

Comments:



**Q.20** Why do you think this accident happened?



*\* Panel can be found on page 2 of the comic book.*

---

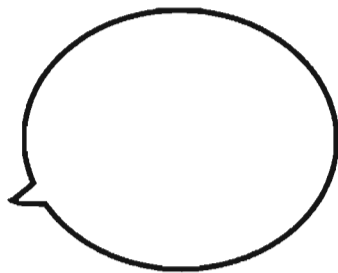
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Comments:

**Q.21** What does the following visual device indicate?



*\* The visual device can be found on page2-6 of the comic book.*

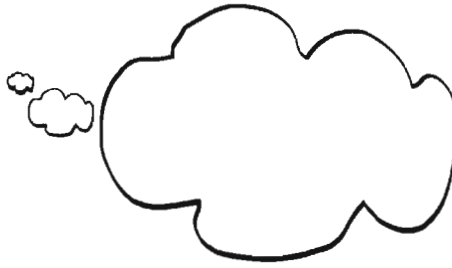
---

---

---

Comments:

**Q.22** What does the following visual device indicate?



*\* The visual device can be found on page 3 of the comic book.*

---

---

---

Comments:

**Q.23** Any general comments about the comic book?

---

---

---

---

---

---

---

---

---

---

*Thank you for your participation and time.*

**Appendix D:** Correct answers to the questionnaire

Question 10: What does the following sign stand for?

Correct answer: D, Please turn automobile engine off.

Question 11: What happened after this scene?

Correct answer: A, The crash dummy looked at his tyres.

Question 12: What happened in this scene?

Correct answer: C, The female dummy explained what could happen if the car came to a sudden stop with the baby in the arms of the male dummy

Question 13: What do the stars indicate in this panel?

Correct answer: E, Pain.

Question 14: In which sequence is one supposed to look at the panels on a page of the comic book?

Correct answer: A (*From left to right and from top to bottom*)

Question 15: What do the following signs mean?

Correct answer for A: Parking prohibited.

Correct answer for B: U-Turn prohibited.

Correct answer for C: Wear your seatbelt.

Question 16: What did the dummy say in this panel?

Correct answer: D, Let's try that again.

Question 17: Please describe what this panel illustrates:

The panel illustrates that when you brake suddenly even at a slow speed that the forces on your muscles are far greater than what they can withstand, which could cause you to slam into your dashboard.

Question 18: What does this scene show?

Correct answer: C, The dummy is pressing down on the brake pedal.

Question 19: In this panel, what does the test dummy compare the tread of the shoes to?

Correct answer: The dummy compares the tread of his shoes to the tread of the tyres.

Question 20: Why do you think this accident happened?

Correct answer: One of the two cars went over a red light at an intersection and drove into the other car.

Question 21: What does the following visual device indicate?

Correct answer: Speech balloon/bubble.

Question 22: What does the following visual device indicate?

Correct answer: Thought balloon/bubble.

Appendix E: Test visual panel classification (page 2)



Appendix E: Test visual panel classification (page 3)

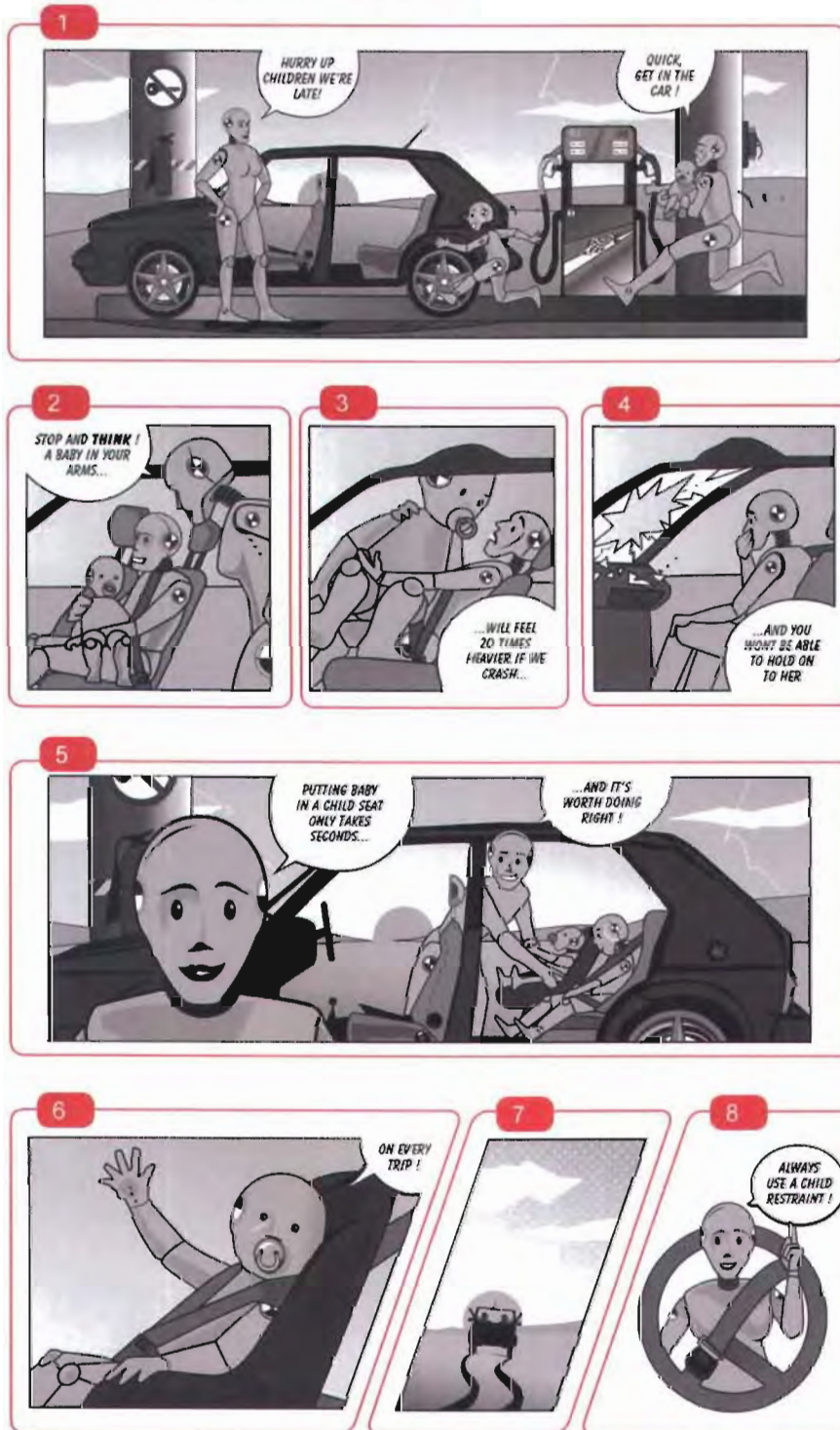


Appendix E: Test visual panel classification (page 4)



Appendix E: Test visual panel classification (page 5)

**THINK. ALWAYS USE A CHILD SEAT \***





## Appendix F: VUT, Faculty of Human Sciences: Course descriptions

### Courses offered at the Faculty of Human Sciences:

- Fashion Design
- Fine Art
- Hospitality Management
- Graphic Design
- Photography
- Policing
- Public Relations Management
- Safety Management
- Travel and Tourism Management

Students from the following courses participated in the empirical part of the study which was grouped according to whether they received visual training prior to the data collection phase:

#### Received Visual Training (RVT)

- Fine Art
- Graphic Design
- Photography

#### Received No Visual Training (RNVT)

- Public Relations Management
- Travel and Tourism Management

## Appendix F: Fine Art (Course description)

- National Diploma. Fine Art (Duration: 3 years)
- Baccalaureus Technologiae (B Tech). Fine Art (Duration: 4 years)

**Recommended subjects:** Afrikaans, English, Third Language, Mathematics, Art, History

**Points required: 26 points**

**General admission requirements apply: University admission requirements**

**Other requirements:** A portfolio of works of art will also be evaluated. Prospective students may be required to complete a placement test. In addition to the portfolio, prospective students will be expected to complete four prescribed practical projects; which will be submitted at the interview. Relevant industrial experience may be accepted as a minimum entry requirement.

**Course structure:**

### NATIONAL DIPLOMA: Fine Art

Course structure / Syllabus	
First Year:	Art Theory, Communications, Drawing, Two-Dimensional Studies, Three-Dimensional Studies
Second Year:	Art Theory, Communications, Drawing plus two of the following major subjects: Painting, Printmaking, Sculpture, Ceramics, Photography
Third Year:	Art Theory, Communications, Drawing plus two of the following major subjects: (one of which must have been completed in the second year) Painting, Printmaking, Sculpture, Ceramics, Photography

### BACCALAUREUS TECHNOLOGIAE (B Tech): Fine Art

Course structure / Syllabus	
Fourth Year	Art Theory, Research Methodology, specialise in a major subject e.g. Painting, Printmaking, Sculpture, Ceramics, Photography

### Overview

Essentially, training in Fine Arts equips the graduate to operate as a practising professional artist in the national and international arenas. Given the diversity of skills that the graduate will have, however, he/she would be sufficiently skilled to do such work as murals, portraits, illustration, computer art and computer animation. These are linked to the various Fine Art disciplines such as drawing, painting, sculpture, printmaking, ceramics and computer technology.

### Career opportunities

The major opportunity is to be a practising artist. Successful practising artists are able to earn a very good income from the sale of their work. Again, given the diversity of the skills acquired during the Fine Art course, the graduate should be able to find employment in educational institutions, museums, art galleries, publishing houses, advertising agencies, film companies and TV production houses. The graduate would also have acquired skills to operate as an entrepreneur and set up his/her own business.

## Appendix F: Graphic Design (Course description)

- National Diploma. Graphic Design (Duration: 3 years)
- Baccalaureus Technologiae (B Tech). Graphic Design (Duration 4 years)

**Recommended subjects:** English, Third Language, Mathematics, Art, History, Computer Literacy

**Points required: 26 points**

**General admission requirements apply: University admission requirements**

**Other requirements:** Prospective students may be subjected to a placement test and possible personal interviews. A portfolio of works of art may be presented at the selection interview. Relevant industrial experience may be accepted as a minimum entry requirement.

**Course structure:**

### NATIONAL DIPLOMA: Graphic Design

Course structure / Syllabus	
First Year:	Communication Design 1: Typography, Applied Design, Computer Training Design Techniques 1: Photography, Printmaking, Illustration Drawing 1, History of Graphic Design 1, Professional Practice 1: Communication, Theory of Business
Second Year:	Communication Design 2: Advertising, Promotion, Corporate Design and Web Design, Design Techniques 2: Computer Graphics, Printmaking, Illustrations, Photography Drawing 2, History of Graphic Design 2, Professional Practice 2: Communication, Theory of Business, Theory of Reproduction Processes
Third Year:	Communication Design 3: Advertising, Promotion, Corporate Design, Web Design, Interactive Design, Design Techniques 3: Computer Graphics, Printmaking, Illustrations, Photography, Drawing 3, History of Graphic Design 3, Professional Practice 3: Communication, Theory of Business

### BACCALAUREUS TECHNOLOGIAE (B Tech): Graphic Design

Course structure / Syllabus	
Fourth Year	Academic Report 4, Design Techniques 4 or Communication Design 4, History of Graphic Design 4, Research Methodology

### Overview

What does a graphic designer do? The graphic designer contributes greatly to the visual environment by designing posters, signs, adverts, publications, packaging and corporate identities. These are created through the use of computer graphics and various electronic and other media skills. The role of the graphic designer is constantly expanding as communication becomes more important in our technology driven society. The graphic designer is seen as an initiator of creative ideas for the promotion and selling of services and products. A designer is required to combine a command of new technologies and visual language with an entrepreneurial attitude.

### Career opportunities

Advertising Agencies, Design Studios, Illustrators, DTP, Computer Graphic Animator, Photographic Manipulation, Editorial Design, Communication Design, Web Page Design and Interactive Design.

## **Appendix F: Photography (Course description)**

- National Diploma. Photography (Duration: 3 years)
- Baccalaureus Technologiae (B Tech). Photography (Duration: 4 years)

### **Overview**

Photographers work in the world of visual communication. Through the media of still images they communicate with individuals and masses. Their role is to convey ideas, concepts, and information by means of a photograph. This form of communication can be found in newspapers, magazines, pamphlets, billboards, books, posters and many other media. Work can be done for exhibitions, printing in publications, packaging and posters or for use in audiovisual presentations, multimedia productions and the Internet. Photographers are required to work with sophisticated equipment and to be familiar with the various photographic processes. Most photographic work presents a range of practical problems including lighting, composition, exposure, development and printing, as well as the opportunity to create various special effects. The photographer is also a business person, dealing with a variety of clients on a day to day basis, making a living through effective visual communication.

### **Career opportunities**

Photographers can be employed in various industries or may be self employed as Freelance Photographers. A Freelance Photographer would work for various clients and would photograph a wide range of subjects. A Photographer could be employed by the media, covering news, events and photographing people, places and events of public interest for both newspapers, magazines or television.

An Industrial Photographer would work for large organisations and take photographs that range from industrial interiors, portraits for annual report to close-up images for manufacturing faults. Educational institutions such as universities employ Photographers to prepare materials for teaching and training purposes, as well as for promotional work.

Medical organizations, hospital clinics and training hospitals make use of photographic images for training and education. This type of work can include medical and scientific photography, macro photography and photomicrography as well as many specialised techniques. The advertising industry is one of the biggest users of photography.

Photographs of products and services are used in many advertisements. Most of this type of work is done in the studio where lighting can be controlled. Digital image manipulators are highly sought after. With the latest digital imaging technology and appropriate computer software the door to world electronic media opens with many new and exciting career options to follow.

**Course structure:**

**NATIONAL DIPLOMA: Photography**

Course structure / Syllabus	
First Year:	Theory of Photography 1, Professional Practice 1, Visual Communication 1, Applied Photography 1
Second Year:	Theory of Photography 2, Professional Practice 2, Visual Communication 2, Applied Photography 2
Third Year:	Theory of Photography 3, Professional Practice 3, Visual Communication 3, Applied Photography 3

**BACCALAUREUS TECHNOLOGIAE (B Tech): Photography**

Course structure / Syllabus	
Fourth Year	Theory of Photography 4, Applied Photography 4

**Recommended subjects:** Afrikaans, English, Third Language, Physical Science, Mathematics, Computer Literacy

**Points required: 26 points**

**General admission requirements apply: University admission requirements**

**Other requirements:** Prospective students may be subjected to a placement test and possible personal interviews. Relevant industrial experience may be accepted as a minimum entry requirement.

## Appendix F: Public Relations Management (Course description)

- National Diploma. Public Relations Management (Duration: 3 years)
- Baccalaureus Technologiae (B Tech). Public Relations Management (Duration: 4 years)

### Overview

The PRO (PRP) should be equipped to be a link between the company and the public, be able to communicate effectively with the internal and external public, liaise with the press and other media; compile and edit press releases, bulletins, journals, brochures; organise a variety of functions and be responsible for the corporate image of the company.

### Career opportunities

Can be employed as a Public Relations Practitioner by commerce and industry, central, provincial and local government, tertiary and other educational institutions, the news media and PR consultancies. Professional Status: A qualified practitioner can register as a member of the Public Relations Institute of South Africa.

### Course structure:

#### NATIONAL DIPLOMA: Public Relations Management

Course structure / Syllabus	
First Year:	Communication Science 1, Public Relations 1, Media Relations 1, Media Studies 1, Law for Public Relations, Introduction to Word Processing. English, Afrikaans or South Sotho
Second Year:	Communication Science 2, Public Relations 2, Media Relations 2, Marketing and Advertising, Videology, Business Studies: Public Relations, Social Psychology
Third Year:	Distance Education: Communication Science 3, Public Relations 3, One year practical training plus formal seminars on Saturdays, as the need arises.

#### BACCALAUREUS TECHNOLOGIAE (B Tech): Public Relations

Course structure / Syllabus	
Fourth and Fifth Year	Communication Science 4, Public Relations 4, Media Relations 3, Research Methodology, Management Practice 4

**Compulsory school subjects:** English HG (C) or SG (B)

**Recommended subjects:** Computer Skills

**Points required:** 26 points

**General admission requirements apply:** University admission requirements

**Other requirements:** Prospective students may be required to complete a placement test.

## Appendix F: Travel and Tourism Management (Course description)

- National Diploma. Tourism Management (Duration: 3 years)
- Baccalaureus Technologiae (B Tech). Tourism Management (Duration: 4 years)

### Overview

Functions of a Travel and Tourism Consultant are to provide information regarding various destinations and attractions locally and overseas, guide customers in planning their itinerary, handle in a competent and professional manner the planning, compiling and execution of travel arrangements for individuals as well as groups, market effectively special packages, products and professional services.

### Career opportunities

Can be employed by travel agencies (wholesale and retail), SATOUR, holiday accommodation/resorts, transport and travel organisations, publicity associations in cities and towns and tourist information centers.

### Course structure:

#### NATIONAL DIPLOMA: Travel and Tourism Management

Course structure / Syllabus	
First Year:	Tourism Management 1, Tourism Development 1, Travel and Tourism Practice 1, Marketing for Tourism 1, English or Afrikaans, End User Computing 1
Second Year:	Tourism Management 2, Tourism Development 2, Travel and Tourism Practice 2, Marketing for Tourism 2, Law for Tourism 1, Media and Public Relations for Tourism 1
Third Year:	Tourism Management 3, Tourism Development 3, Travel and Tourism Practice 3, Cooperative Education

#### BACCALAUREUS TECHNOLOGIAE (B Tech): Travel and Tourism Management.

Course structure / Syllabus	
Fourth and Fifth Year:	Tourism Development 4, Marketing for Tourism 3, Advanced Strategic Management, Research Methodology and a Research Project.

**Compulsory school subjects:** Languages HG (C) or SG (B)

**Recommended subjects:** Typing, Accounting, Business Economics, Geography

**Points required:** 26 points

**General admission requirements apply: University admission requirements**

**Other requirements:** Prospective students may be required to complete a placement test.

**Appendix G:** Pictorial signs and information. Engen petrol station in Alberton, Gauteng (see Chapter 5, Question 10)





**Appendix H: Definitions of Durand's rhetorical operations (Burgin 1982:75  
and Zakia 2002:313)**

<b>Rhetorical Operation</b>		
<b>Addition</b>		
<b>Zone: A</b>	<b>Term</b>	<b>Definition</b>
1	Repetition	The act of duplication or replication
2.1	Rhyme	The similar sound shared by different words
2.2	Simile	Comparing one thing with another that is different
3	Accumulation	The development of expansion
4.1	Zeugma	A figure of speech using a verb or adjective with two nouns, to one of which it is strictly applicable while the word appropriate to the other is not used
4.2	Antithesis	Direct opposite between two things
5.1	Antanaclasis	Repeating a word in a different or contrary sense
5.2	Paradox	Conflicting with a predetermined notion of what is realistic
<b>Suppression</b>		
<b>Zone: B</b>	<b>Term</b>	<b>Definition</b>
1	Ellipses	Indication of an omission, in terms of words in an sentence
2.2	Circumlocution	Ambiguous talk, the use of many words where less would be sufficient
3	Suspension	The act of postponement
4.1	Dubitation	Creating hesitation or uncertainty
4.2	Reticence	Avoiding the act of over informing, or revealing more than what is necessary
5.1	Tautology	Repeating a similar thing twice, using different words
5.2	Preterition	The expression of a past act or state
<b>Substitution</b>		
<b>Zone: C</b>	<b>Term</b>	<b>Definition</b>
1	Hyperbole	Overstated statements not meant to be taken factually
2.1	Allusion	A hidden reference
2.2	Metaphor	Using something to embody or symbolise something else
3	Metonymy	Switching a name for an attribute in terms of what it represents
4.1	Periphrasis	Circumvented way of speaking
4.2	Euphemism	The use of a vague expressions instead of the stark reality

5.1	Pun	The humorous use of words that sound similar although have different meanings
5.2	Antiphrasis *	An ironic or humorous use of words
<b>Rhetorical Operation (continued)</b>		
<b>Exchange</b>		
<b>Zone: D</b>	<b>Term</b>	<b>Definition</b>
1	Inversion	The reversal of the order of words in an sentence
2.1	Hendiadys	An idea expressed by two words, connected by 'and'
2.2	Homology	Correspondence
3	Asyndeton	The omission of a coincidence
4.1	Anacoluthon	Sentence construction that is deficient in grammatical sequence
4.2	Chiasmus	crosswise arrangements
5.1	Antimetabole *	Double meaning
5.2	Antilogy	Contradiction in terms

\* Source: Zakia (2002:315)