A SYSTEMIC FUNCTIONAL APPROACH TO GRAPHIC DESIGN IN PRINT MEDIA

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SUMMARY

This thesis is an account of my search for a framework for the analysis of graphic design texts. It begins with the premise that existing research frameworks for the analysis of graphic design texts are inadequate to address the intersemiotic processes between the two semiotic resources (linguistic and visual) found in graphic design texts.

Firstly, I investigate the nature of graphic design in order to construct a framework which can address its idiosyncrasies. The question of the possibility of the existence of a meta-language for the language of graphic design is put forth. Its plausible solution is to be found in Systemic Functional Theory—which posits the exotropic view that it is able to adequately and efficiently address the needs of the analysis of graphic design texts.

I proceed to review existing Systemic Functional (SF) frameworks which are relevant and related to the analysis of the graphic design text as a multisemiotic text of the printed medium. My objective is not to find fault but to understand what works and what does not. I embrace those which offer relevant and suitable solutions while attempting to address to a certain degree issues which have surfaced and gaps which need to be filled.

Finally, I propose an SF framework which is flexible enough to handle the needs of the analyst-graphic designer and proceed to analyse an actual graphic design text to demonstrate how inter- and intra-semiosis processes produce symbiotic and synergetic meanings.

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1. CHAPTER 1: SITUATING THE RESEARCH

1.1. WHY GRAPHIC DESIGN?

The need to develop a systemic-functional approach to graphic design arises out of my teaching of design students and my private design practice. Design students often find themselves unable to discuss their design works and concepts, whether in design-specific or layman terms. Reinforcing this sense of inarticulation, graphic design practitioners in the industry lament the lack of analytical tools which are consistent, applicable and relevant to graphic design *per se* and which they are able to use to explain design texts to one another as well as to the clients (Bierut et al., 1994, 1997, 2002; Swanson, 2000; and Heller and Ballance, 2001).

Heller in Bierut et.al (1997: 1) in the graphic design criticism series *Looking Closer* observes that 'in the absence of a critical graphic design vocabulary, various models (based on –isms, -ologies, and –oties) have been adapted from academia and journalism, running the gamut from scholarly exegesis to investigative profile'. The lack of a common analytical system has led to differing and almost inexorable views on the same graphic design text on the basis of differing terminologies.

For example, Swiss designer, Josef Müller-Brockmann's public awareness poster entitled *Less Noise* (as displayed in Figure 1.1 on the next page) is described by Hollis (1994: 134) as a poster which is 'dramatized by changes of scale; heavy cropping of the black-and-white photographs; often a diagonal axis; colored lettering for slogans of four and five syllables and injunctions that suggested they could be shouted'. This contrasts against Meggs' (1998: 329) description: 'Red type declares "less noise", while the photography graphically depicts the discomfort of noise'. The former describes the graphic design text in terms of production values and composition while the latter, in a more representational interpretation of the graphic design text. Although the same graphic design text is under scrutiny but both writers appear to be analysing very different graphic texts.

Figure 1.1: Less Noise
(Reproduced from Meggs, 1998: 329)

As my field of academic studies is in linguistics, I discovered that the Systemic Functional (SF) approach used to analyse language (Halliday, 1994, 2004; Martin, 1992; Martin and Rose 2003) was adapted for the analysis of visual images (O'Toole 1994; Kress and van Leeuwen 1996, 2006) and subsequently, used for the analysis of a multitude of multisemiotic texts (for example, Baldry and Thibault, 2006, Iedema, 2001, 2003; Leeuwen and Jewitt, 2001; Martinec and Salway, 2005; O'Halloran 2004, 2005 and Royce, 1998). These SF derivatives and their respective frameworks of analysis postulated by these proponents present the potential of Systemic Functional Theory (hereafter, SFT) as a viable tool in the analysis of graphic design texts.

Suitably inspired by and analogous to O'Toole's objective, I will attempt to 'search for a language through which our perceptions of a work of art can be shared' (O'Toole, 1994: 4), – in this case, the 'work of art' in question is a graphic design text. It is with this objective to create an analytical tool and system which can be used by graphic designers to dissect, understand and illuminate graphic design texts that I begin this thesis.

1.2. THE SYSTEMIC FUNCTIONAL APPROACH

The roots of the Systemic Functional (SF) approach can be traced back to the founder of semiotics, Saussure (1959), who introduced the concepts of the sign, the signifier and its

signified, catalysing structuralist schools of thought. Influenced by these salient concepts, J. R. Firth (1957) began to study semantical qualities based on the collocative nature of words and sounds, establishing Firthian prosodic analysis. Expanding on his work since the 1960s, his protégé, Halliday (1985) developed a theory of grammar which culminated in the seminal work, *An Introduction to Functional Grammar* (Halliday, 1985; hereafter, IFG). Together with Martin's contribution at the discourse-semantics strata (Martin, 1992; Martin and Rose 2003), it is known as Systemic Functional Grammar (SFG). SFG, with its own comprehensive terminology, found fertile ground in the University of Sydney, took root within the Newtown Semiotics Circle and spread to various parts of the world.

The aim of SFG as laid out by Halliday (1994: xv) is 'to construct a grammar for purposes of text analysis: one that would make it possible to say sensible and useful things about any text, spoken or written, in modern English'. Halliday's work focuses mainly on the lexicogrammar stratum of language which he believes to be 'the inner core of language'. Halliday's brilliance lies in his ability to extract four strands of meaning in the clause and clause complex, namely the ideational metafunction (which consists of the experiential and logical metafunctions), the interpersonal metafunction and the textual metafunction and integrate them into a systemic framework. With these four metafunctions, we are able to understand how language is being used to share experience and ideas, express and develop relationships and make logical sense. In short, SFG holds the secret of understanding how language actually works.

Today, SFG has transformed into a more universal form known as Systemic Functional Theory (SFT), in which theoretical positions and respective frameworks are based on SFG fundamentals such as metafunctions, rank-scale and systems. As a result, SFT has established itself as the preferred approach in contemporary textual analysis and interpretation in various academic disciplines. Although in IFG, Halliday (1994: xxix) himself attested that 'it is unlikely that any one account of language will be appropriate for all purposes', it seems that his theory of grammar 'within a general cognitive framework' (ibid.: xxx) has become the

swiss knife of modern discourse analysis. Hasan attests that SFT has become an exotropic theory as opposed to an endotropic theory:

> 'the necessary and sufficient condition for an exotropic theory's potential for meta-dialogism is met when its conceptual syntax is so developed that not only does the theory distinguish the different orders of relevant phenomena but it is also able to specify the nature of this relevance' (Hasan 1999: 13-14).

As a result, many researchers have embraced SFG and based on their specific needs and domains to formulate SF theories and frameworks to analyse a plethora of texts and discourses. In current SFT research, paintings and sculptures have been analysed (O'Toole, 1994), architecture (O'Toole, 1994, 2004), mathematical discourse (O'Halloran, 1999b, 2000, 2005, forthcoming), economics texts (Royce, 1999; Baldry and Thibault, 2006), museum exhibits (Pang, 2004), websites (Kok, 2004; Baldry and Thibault, 2006), films (Baldry and Thibault, 2004, 2006; O'Halloran, 2004), comic strips (Baldry and Thibault, 2006), advertisements (Royce, 1998; Cheong, 1999, 2004; O'Halloran, in press), building plans (Iedema, 1998), environmental space (Alias, 2004) and biology textbooks (Guo, 2004).

The constant (re)applications of SFL in diverse fields have resulted in a growing school of thought and suggests the plausibility of SFT functioning as an exotropic theory embracing all forms of discourses. It is on this notion that this thesis embark on an SF approach to the analysis of graphic design texts.

1.3. DEFINING GRAPHIC DESIGN

Before we create a model for the analysis of graphic design texts, it is of paramount importance to define graphic design as it will help us to understand graphic design—what it means and what it entails. However, graphic design appears to defy definition; the attempt to define or create boundaries, especially with chronological instruments, from a diachronic perspective, is often wrought with confusion and incoherence. However, this has not deter some academics and practitioners of graphic design to define and concretise graphic design in

various attempts using chronological instruments (Ashwin, 1983, Heller and Ballance, 2001, Hollis, 1994 and Meggs, 1998).

The historicity of graphic design is often debated widely and at times, remain elusive. Even graphic design books with titles like *History of Graphic Design and Communication – A Sourcebook* (Ashwin, 1983) and *Graphic Design History* (Heller and Ballance, 2001) only manage vignettes of graphic design and fail to examine the progression of graphic design accurately or account for the prominent rise of the use of graphic design from the Industrial Revolution to the current day. They appear as readers—compilations of articles on disparate and quite distinctive graphic design texts, admittedly, of irrefutable historical value but with no apparent chronological linkage between them.

The usual 'bibles' which manage to elucidate on the history of graphic design are also inconclusive and often at odds with one another, unable to come to terms to the 'correct' history of graphic design (if there was even one). Adopting an ambivalent position, Hollis (1994) begins the history of visual communication from the beginning of time when early man sees footprints of animals and recognises them as signs. Yet, he defines graphic design as 'the business of making or choosing marks and arranging them on a surface to convey an idea' (Hollis, 1994: 7) and begins the history of graphic design from 1890 with the popular use of chromolithography printing by Sir John Millais and Jules Cheret (ibid.: 11). He continues in *Graphic Design – A Concise History* to compartmentalise graphic design in a chronological sense with an emphasis on countries which have contributed 'significantly' to graphic design, and ends with the International Swiss style, which is adopted and manipulated to varying degrees by different European countries. It presents a historical view skewed towards Western artforms with a visible lack in recognising the contribution and the development of graphic design in other countries in Asia-Pacific and East Asia and the significance of their various graphic design texts.

Conversely, brandishing a broader stroke and more objective view, Meggs (1998) in his seminal book, *A History of Graphic Design*, covers Asian artforms such as the Chinese, Arabic, Aramic and Korean alphabets together with their calligraphic and painting

derivatives. And in a comparatively similar vein, he begins graphic design from the prehistoric period as evidenced by the famous cave drawings by cavemen in the Lascaux caves in Southern France and continues in a chronological and detailed fashion covering European book-making, the impact of inventions in the Industrial Revolution, the influence of modern art, the use of computers in graphic design and terminates abruptly at the advent of the Internet.

In their entirety, these overly broad and expansive strokes prove to be uncomfortable for design practitioners to reconcile. This is evident and in stark contrast with educator and historian, Katherine McCoy who believes that 'graphic design is a very new design expression, a phenomenon of the last hundred years' (Heller and Ballance, 2001: 3). Ashwin (1983: 1) also asserts that:

> "The expression 'graphic design' is not in itself sufficient to denote the full range of sources used, since for most of the period in question there was no identifiable professional activity or industrial role which could be described as 'graphic design' in the contemporary sense..."

In truth, from an etymological standpoint, the term, 'graphic design' according to Meggs (1998: xiii) was coined as late as 1922 by book designer William Addison Dwiggins to concretise 'his activities as an individual who brought structural order and visual form to printed communications'. And as noted by Barnard (2005), the terms 'graphic design' and 'graphic designer' do not appear in the Chambers English Dictionary (1988) and the definitive The Shorter Oxford English Dictionary (1990 imprint). And of late, to address the influx of web and moving media into the domain of design, the term 'graphic design' was transformed into an even broader term, 'visual communications', plausibly, a term adopted by educational institutions to imbue graphic design with a relevance and significance worthy of today's multimedia onslaught.

With the chronological or diachronic approach, graphic design history has in itself become nebulous, beginning at different points in history, covering different eras, movements, disciplines and even graphic design texts. However, it must be asserted that

defining graphic design in historical terms is useful for the uninitiated graphic design student as it reveals the 'historical' value and tradition of graphic design. A synchronic approach may reveal the significance of the graphic design text(s) and unravel the meaning creation process but still may not be able to capture the definition of graphic design. The difficulty in defining graphic design does not reside in the approaches but in the innate qualities of graphic design itself. The approach is not problematic but the subject is problematic.

However, it is incumbent on this thesis at this juncture to explore the enigmatic definition of graphic design because, in order to design a suitable analytical tool, the subject in question has to be explicated and understood. Hence, it may be suitable to define graphic design not by identifying or even analysing its instantiations through distinguished texts, but by distilling graphic design itself—the qualities that define its nature. The following are explorations in discovering graphic design along lines which are commonly associated with graphic design: ubiquity, functionality and fluidity/ ephemerality.

1.3.1.   UBIQUITY

The pervasive role of graphic design in our current landscape is recognised widely by theorists and designers, and in a sense, almost irrefutable with the sheer number of articles by academics, graphic design practitioners and observers alike. Barnard (2005: 1) attests that 'graphic design is everywhere. Yet it is often taken for granted, passing unnoticed and unremarked as it blends in with the visual culture of everyday life'. Kalman et al. (1994: 27) concurs: 'graphic design isn't so easily defined or limited. (At least, it shouldn't be.) Graphic design is the use of words and images on more or less everything, or more or less everywhere'.

Further affirming graphic design's ubiquity, Yelavich in Albrecht (2000: 9) writing for the National Design Triennial, claims that 'design is that highly specialized realm of human activity that shapes virtually everything in the world' while Poynor (2002: 6) confirms:

'Today, we live and breathe design. Few of the experiences we value at home, at leisure, in the city or the mall are free of its alchemical touch. We have absorbed design so deeply into ourselves that we no longer recognize the myriad ways in which it prompts, cajoles, disturbs and excites us. It's completely natural. It's just the way things are'.

Graphic design has infiltrated into every product (and service) and has become the hallmark of the industralised economy. Since the Industrial Revolution, advertisements, posters, flyers, logos and packaging are instruments of graphic design utilised to announce the arrival of new products, confirm the quality of and promote existing products. In today's cultural and global landscape, we interact with graphic design when we read our watches and clocks; the advertisements on newspapers, magazines, books and television; posters, textbooks, typefaces, letters, numbers, layouts, colours etc.—every visual text is a graphic design text and their different variations belong to the domain of graphic design. It is about everything and is everything because it is a language, a language that is so common that it has become an invisible 'sign' language. It is invisible because readers have, to a certain extent, 'unwittingly' acquired this language from young. As a result, we are culturally and socially conditioned to recognise and read these texts, and even demand them from our global visual culture, choosing them over 'unbranded' goods and services.

Hollis (1994: 10) espoused that graphic design 'constitutes a kind of language with an uncertain grammar and a continuously expanding vocabulary'. I would like to suggest instead that this common language which binds us all with its own intrinsic rules, possesses a definitive grammar – 'a means of representing patterns of experience' (Halliday, 1985: 101). And like any grammar, it has evolved through time, used in different contexts of culture and situation, in different realities. Its vocabulary has also increased over time as the global landscape changes; its voice growing ever stronger. Instead of muting the voice of the written language, it amplifies, speaking ideas in louder and more lucid ways. At times, it even transforms the voice of the written language, contradicting it and thus, providing a very unique song. It bypasses the consumers' minds which process logical thoughts and empowers the linguistic semiotic resource with a tangibility that seizes our hearts and souls with its

multisemiotic texts and multifarious semiotic resources and systems. And it is postulated in this thesis that this powerful grammar can be deconstructed with the principles and tools afforded by Systemic Functional Theory (hereafter, SFT).

Kress and Leeuwen (1996) argues that the visual language is not a universal grammar and is 'culturally specific'. However, today's ubiquity and infiltration of the visual language (through various media conduits) has created the possibility of a universal grammar which transcends cultures and societies. This is easily circumstantiated by the definitive signs for the female and male toilets. The usage of these signs, as promulgated by Ciochetto (2003), is a consequence of international business, recreational travel and major world events such as Olympics in which there is a need to create cross-cultural signs as people from all over the world converge in a single area. In fact, the signs are so recognised, that variations to the signs (which arose out of the need to differentiate oneself from the crowd) has no bearing whatsoever to the meaning of the signs. They have become universal signs for male and female toilets. In effect, the power of the language of graphic design transcends the restrictions and limitations associated with the monolithic linguistic semiotic resource of communication and creates symbols, signs and images which are able to be assimilated into disparate cultures seamlessly and at times, insidiously.

It is a language which deftly employs the use of symbols: golden arches, swooshes, red cola cans and windows; these are the graphic signposts defining our age, representing our needs and wants, even our very existence. The corporate logos and tradedresses are so graphical and natural to us that they become invisible signs. Crow (2003: 8) observes that 'as consumers of visual art we have become highly sophisticated readers of signs and signals. We decode meaning from compositions with subconscious ease'. It is in this 'subconscious' mode that we live our present graphical world. The omnipresent yet invisible signs proliferate our lives to the extent that we are unable to read critically, to be able to stand at a vantage point not as consumers but as readers, to read the signs of our times and to come to terms with them. Our subconscious states of mind would rather absorb, consume, numb ourselves, knowing it is easier and comfortable to rest in the common and easy. One can argue easily

that the constant bombardment of these graphical texts by our current multisensory multimedia does not allow us to read and analyse them. However, it **is** because of its proliferation that we need to safeguard ourselves in the wrong reading or mindless acceptance of these (sub)texts. We do not need to learn how to 'read' the visual texts (as suggested by Kress and Leeuwen, 1996, 2006), what is required is a 'rereading' of the texts. Underscoring this, Kress and Leeuwen (1996, 2006) suggests that our acquisition of 'visual literacy' is of paramount importance – as a 'a matter of survival'.

The definition of graphic design along the line of ubiquity creates the understanding that graphic design is a common language with a definitive grammar and vocabulary is plausibly, the current *lingua franca* of the world and it is imperative for users and readers of this semiotic resource to analyse or 'reread' this language. What is required is a metalanguage, a language to understand another language, 'the language used to make their representations in the controlling system' (Turchin, 1999). With a metalanguage, this potent language can be distilled into its various constituents, allowing the graphic designer and reader to understand how this language is being used and in response, use the language effectively and responsibly. And this thesis postulates that this metalanguage resides in the domain of SFT—that is, the SF approach is able to create a tool and system for both producers and readers to 'reread' these double-barreled texts.

1.3.2. FUNCTIONALITY

In order to define graphic design, the functional aspects of graphic design may shed some light on this enigmatic 'art' form. Heller (2001: 3) comments that 'graphic design was invented to sell the fruits of mass production to growing consumer societies in Europe and North America in the late nineteenth and early twentieth centuries'. Concurring with this view of graphic design's indebted and subsequently subservient role to commerce, Frascara in Heller (2001: 15) writes:

> 'Design doesn't exist in order to produce visual things; design exists because there
> are needs to meet, tasks to undertake, goods to sell, people to train, objects of many

sorts to help us live the way we want to. The visual and the physical are design's means to meet human needs, wishes and desires'.

Commercialism that has propelled the function of design to prominence, beyond the mass production of books and bibles since the invention of the Gutenberg press. In the late 20th century, during the Industrial Revolution, the invention of steam power and subsequently steam-powered machines increased production of the agrarian community as well as opened the way for the mass production of goods. With the abundance of goods, graphical posters were created to promote and sell these goods to the public within a time span: 'In the streets of the expanding cities at the end of the nineteenth century, posters were an expression of economic, social and cultural life, competing to attract buyers for goods and audiences for entertainment' (Hollis, 1994: 11). The landmark *Bubbles* painting by Sir John Everett Millais was added to a bar of soap at the bottom right corner and the words, 'Pear's soap', thereby transforming into an advertisement for Pears Soap Company which became the definitive symbol for successful early advertising (as shown in Figure 1.2). It also marks the birth of an uneasy synergetic relationship between the two key functional members in graphic design, namely, that of aesthetics and commerce.

Figure 1.2: Bubbles Painting Transformed into Pears Soap Advertisement
(Reproduced from Hollis, 1999: 11)

This duality of graphic design is an often remarked and discussed topic among designers; the relentless straddling between an art form or a craft (Heller, 2001; Bierut, 1994; 2002; Holland, 2001). Bierut (2001: 181) asserts that graphic designers face 'the uneasy tension between making a statement and making a living' while McCoy (in Heller and Balance, 2001) cites the tension between craft and language, business and art. Often, designers question their occupational identities in the midst of deliberating between art and commerce. On highly commercial grounds, their process of thinking are terminally determined by client's decisions and market forces, which leads to the quip that 'the client's wrong decision is the final decision'. The functional role of a designer becomes an operose exercise in balancing between the fulfillment of artistic albeit personal motivations and client's expectations.

In recent times, countless corporate *faux pas* by major companies like Enron, Nike and MacDonald's have led to a backlash, exposing corporate irresponsibility and greed, resulting in the call for corporate governance in America. This has also led to the exacerbation of the already pronounced art-business dichotomy, causing designers around the world to question the latter, that is, their craft in producing work to fuel mass consumerism and promulgate so-called greed. This line of questioning culminated in the 'First Things First Manifesto' (FTF) in 2000 in which thirty-three prominent graphic practitioners declared that:

> 'The profession's time and energy are used up manufacturing demand for things that are inessential at best… Many of us have grown increasingly uncomfortable with this view of design. Designers who devote their efforts primarily to advertising, marketing, and brand development are supporting, and implicitly endorsing, a mental environment so saturated with commercial messages that is changing the very way citizen-consumers speak, think, feel, respond and interact. To some extent we are all helping draft a reductive and immeasurably harmful code of discourse… We propose a reversal of priorities in favor of more useful, lasting, and democratic forms of communication – a mind shift away from product marketing and toward the exploration and production of a new kind of meaning' (Bierut, 2002: 5).

This was a deliberate attempt to shift the function from one which is solely based on commerce to other more 'deserving functions' such as to promote social causes, to activate certain reactions from readers or simply, to cause people to think, especially in a post 9-11

environment. The world has witnessed the adoption of design in political messages either supporting or decrying the war efforts in Iraq in the banners, buttons, t-shirts, websites and posters. Global activist organisations like *Make Poverty History* (http://makepovertyhistory.org) and *Adbusters* (http://adbusters.org) employ graphic design in their efforts to change the social and political environments through the ubiquitous (and now, overused) wristband, postcards, books, flags, posters, websites etc.

Whether the function is to serve a commercial, political or social end, design still serves a function. Unlike art, design cannot exist for itself, it needs to exist for somebody or something. It is art in action. It is art that calls for action. It is actively asking for reaction. It cannot be passive because that would mean its failure to speak and communicate what it is trying to convey to the audience. Dilnot (1984: 14) concurs with this view: 'the essential field of design's meaning and import… is not the internal world of the design profession, but the wider social world that produces the determining circumstances that lead to the emergence of designers'.

The delineation of graphic design into its various functions have been undertaken by many critics, including Hollis (1994) who differentiate graphic design into 'identification'; 'information' and 'instruction'; and 'presentation' and 'promotion' functions. He believes that the primary role of graphic design is identification—'to say what something is, or where it came from' (ibid.: 10) citing examples such as symbols, labels, logos (or the more recent term, brands). The secondary role is information and instruction, that is, to indicate 'the relationship of one thing to another' (ibid.) akin to the Barthian concept of connotation. Examples of graphic design texts fulfilling this role are maps, instruction manuals, diagrams and directional signs. And the third role is presentation and promotion—'to catch the eye and make its message memorable' (ibid.), for example, advertisements, brochures and banners.

Adopting an alternative view, Barnard (2005) claims that Hollis has committed 'tautological' errors by defining the functions in similar terms, for example, the first function which is 'to say what something is' is similar to the secondary informational function, which bears an analogous meaning. Instead, he adopts a system in which graphic design has the

functions of 'information', 'persuasion', 'decoration' and 'magic'. He subsumes all of Hollis'

functions into the informational function, claiming that graphic design's function is 'to impart

(by definition, new) knowledge, or intelligence' (ibid.: 14). The persuasive or 'rhetorical'

function is 'to persuade, to convince or merely affect a change in thought or behaviour' (ibid.:

15), the decorative or 'aesthetic' function is to ornament the graphic text and provide

'enjoyment and pleasure' and the magical function is 'to make absent or distant people or

places "present" ' to the reader, citing the example of keeping photographs of loved ones in

our wallets (ibid.).

A cursory yet fastidious analysis of the two delineations will bear similarities rather

than pronounced differences as suggested by Barnard (2005). Barnard's persuasive and

decorative functions are also related to Hollis presentational function. The lack of elaboration

and hence, vagueness in definitions of the respective functions in both cases may explain the

tautological similarities. However, congruous to its ubiquitous nature, the problem does not

exist in the definition but in the subject. Prior to his delineation of the various functions,

Hollis (1994) states that a design text may use all the three functions simultaneously while

Barnard (2005: 17) asserts that 'the functions have been identified, separated and explained in

order to make them clearer. It is not the case that they can always be separated in one's

experience of graphic design'.

These delineations can only serve as broad guidelines in defining the functional

aspects of design. This will bear a significant impact in our subsequent analysis using the

proposed SF framework as the user will need to understand that to define clearly in strict

demarcations is almost a self-defeating exercise, rather, a flexible and recursive approach

should be taken in order to ensure a comprehensive yet efficacious analysis.

The multitude of functions of graphic design only shows that graphic design is a

parasitic art form reliant on an impetus in order to survive. Unlike art which can serve its own

purpose, graphic design thrives on the knowledge that there must be a reason for its existence.

Even the most creative and self-fulfilling graphical texts, sometimes known as self-

promotional pieces serve only to promote the designers' services. Other apparent self-

fulfilling graphic design texts of the experimental nature have also verged on the need to solve a problem or address an uninvestigated or controversial issue.

And it is probably for this very reason that graphic design will always exist, unlike other fine art forms which face a dying shelf life due to the disinterest of the public or the non-patronage of art buyers. Graphic design will always have proponents, students and practitioners contributing to its already burgeoning of texts, adding to its amassment, creating an extensive resource for research and study. Its existence is guaranteed by their functions. In its ultimate finality, it is (sadly) defined not by itself but by the master(s) whom it serves.

Defining graphic design along this functional line has led us to conclude that graphic design is dependent on its functions (which will be captured in the postulated SF framework through contexts of situation and culture). Hence, it is imperative to understand the respective functions of graphic design and to what end does a graphic design text actually serve and to apply caution, delicacy and flexibility in the construction of the SF framework.

1.3.3. FLUIDITY

As a counterpoint to the inadequacies of historicity in the definition of graphic design, significant developments within the history of graphic design actually 'redefines' graphic design and causes its resultant fluidity and ephemeral quality—'a field… in constant flux' (Bierut, 1999: x). The fluidity and resultant ephemerality of graphic design in the world has not gone unnoticed by many observers and is usually marked by certain major advancements in technology. These technological improvements constantly destablise the position of graphic design by introducing semiotic resources and systems which not only change the *modus operandi* but the entire discourse of graphic design texts.

The first technology to change the design world, or for that matter, the world in general, is undoubtedly the invention of the Gutenberg press in Germany. Johann Gutenberg was able to combine the use of movable type forged out of a special alloy and a mechanical press to print multiple copies of pages at speeds which were unparalleled at that time (Meggs, 1998). Before this invention, scribes would have to copy word for word and line by line in

order to duplicate a particular manuscript. The *Gutenberg Bible* published between 1450-1455 became the first book to be ever published. With this invention, printing became a phenomenon, typography was born, and mass literacy became possible—the commoners have access to books, magazines and newspapers. As a result, graphic design also entered into the process serving as a collaborator and contributor to augment the text in terms of embellishments such as typefaces (commonly termed as 'fonts'), layout and hand-drawn illustrations.

The second advancement in technology is the invention of the camera giving birth to photography. Before this invention, artists pride themselves to be able to create near to real-life representations of the world in their artworks. When Louis Jacques Daguerre managed to use a camera obscura to capture the projected image and imprint it into a light-sensitive plate and thereby, creating a permanent print with unprecedented details, the whole establishment of art was redefined (Meggs, 1998). However, George Eastman who combined a new plate technology to create the *sui generis* camera . The Kodak camera of 1888 allowed the general public to capture their daily lives in actual prints. And today, photography and the recent entry of digital photography have become essential mainstays in graphic design, able to capture real-life in full colour. Conversely, the 'reality' of photographs is always questioned since the deft manipulations of images are now possible with the use of the computer. Still, photographic images remain a significant semiotic system in the creation of meaning in today's graphic design texts.

The third momentous technological invention is Aloys Senefelder's lithographic printing—essentially, a printing process that uses flat plates, which is based on the principle that water and oil do not mix (Meggs, 1998). Subsequently, Godefroy Englemann managed to split a colour image into its various colour components and subsequently these components are used to recreate the composite colour image. The manual application of colour into black and white printed books became obsolete, instead, in its place is the full colour printing of books, posters and magazines. Besides words and images, the graphic design text now has in its arsenal, colour in its full glory and many shades of meaning.

The fourth significant invention is the invention of the computer. Before the advent of the computer, graphic design has evolved into a complicated process which involved a number of different roles played out by graphic designers, typesetters, production artists, camera operators, strippers, platemakers and press operators. In 1984, the *Apple* company invented the *Macintosh* computer with a Graphical User Interface (GUI) and together with *Adobe's Postscript* software and *Aldus' Pagemaker*, desktop publishing was born (Meggs, 1998). By 1990, the Macintosh was capable of colour and the softwares have improved markedly and together with recent direct-to-plate printing technologies, all the disparate roles in the complicated printing process are combined into one singular role—which falls into the hands of the graphic designer.

Currently, graphic design texts are created not by a consortium of roles but by individuals with technical know-how and a singular vision. The power of the creation of graphic design texts which is incumbent on one single individual necessitates the need to understand this power of meaning creation. Ashwin (1983: 1) asserts that 'it was very rare that one man would conceive, draw up and prescribe the total form of a piece of printing in advance of production, and this is the way in which we now think of the role of the graphic designer'.

With the recent invention and advancement in affordable inkjet printing technology, graphic design texts are readily and easily produced by the layman without the need of the printing press. The ease at which the entire populace can become the all-powerful graphic designer with the appropriate software and knowledge of tools is unimaginable during Guternberg's times. In effect, this has caused an avalanche of graphic design texts in today's world as laymen harness this power of meaning-creation, using the rich potentialities of the resources afforded in the process.

Finally, the *coup de grace* invention of the 20th century is none other than the invention of the Internet. Initially, developed as an information sharing network by United States Department of Defense Advanced Research Projects Agency, the ARPANET was only available to a few government agencies and educational institutions. Forefronted by the

European Organisation for Nuclear Research (CERN), the Internet gained popularity and currency and by 1996, the Internet has entered into the psyche of the developed world. Powered by the Internet, graphic design texts, besides appearing on paper, now appear on screen and are imbued with sound and motion and in its final bestowment of power—interactivity. Delivered swiftly across countries, graphic design texts in the form of websites create a diaspora of cyber hypertexts linking one another in an intricate web of connections or labyrinthine maze. Graphic design texts have become highly complex discourse and require analytical tools to dissect and understand their exact forms, structures and meanings.

Of late, graphic design has also grown in its importance and taken a more prominent role as the world becomes more globalised with the proliferated use of the Internet and the countless free trade agreements. The global citizen as envisioned by the Stoics has become a reality and not a philosophical ideology. Fiell and Fiell (2001: 15) assert that through the globalisation of the free-market economy, 'design has become a truly global phenomenon. Throughout the industralised world, manufacturers of all types are increasingly recognizing & implementing design as an essential means of reaching new international audiences & of gaining competitive advantage'.

This is evidenced by the reinvention of an aspect of graphic design which has always been known as logo design or corporate identity design. It has transformed itself into a new form called 'branding'. The impressive invasion and subsequent stronghold into the world's largest market, China, by brands juggernauts like Coca-Cola, MacDonald's and Nike made corporations and countries to believe that branding holds the key to success in their entry into populous China and India with almost guaranteed success. In Singapore, adopting this belief, the government has adopted a strong stance towards branding by forming *BrandPact*—a loosely-associated consortium of various branding companies to help local companies to expand into the global marketplace. The power of branding, harnessed by nations and multi-national corporations, in its quintessentiality, logo design (which is a sub-genre of graphic design).

As promulgated, graphic design texts, as a form of subservient discourse and a by-product of the environment, are affected significantly by technological and global developments. However, instead of declining into oblivion as technology advances, they rise to the occasion and adapt themselves accordingly by assimilating the new technologies, employing the new semiotic resources and systems afforded to them to create even richer texts impregnated with multiple layers of meaning. What is required then is a model that is robust enough, like graphic design texts, to stand the test of time and yet flexible enough to transform itself into another framework to address new technological developments, always maintaining its relevance and significance in today's changing global landscape.

1.3.4. CONCLUSION

Redefining graphic design based on its innate qualities of ubiquity, function and fluidity, besides providing a general overview of graphic design, helps to unravel the essence of graphic design and suggest methods and strategies to 're-read' graphic design texts in order to capture their meaning potentialities and meaning-creation processes. It also serves to actualise the requirements and caution the potential pitfalls for the proposed SF framework in this thesis. It calls for a metalanguage that is undemanding for readers and creators to acquire, flexible to be adapted to new developments and functional to question the purpose of the graphic design text in question.

1.4. CRITICISING GRAPHIC DESIGN CRITICISM

The focus on the analysis of graphic design demands explanation. Is there a need for it? Is there a metalanguage already present or are there tools and systems readily available to the reader and creator (or are they already in use)? At this juncture, there is a need to relook at the analysis of graphic design texts subsumed under the domain of 'graphic design criticism'. Based on earlier definitions of graphic design, it is suggested that the integral elements of ubiquity, functionality and fluidity/ephemerality have a direct effect on graphic design criticism – stifling its voice and ultimately, silencing it.

The proliferation of graphic design texts has created a common visual culture and language that we are so familiar with that it has become part of our lives. We view labels, brands, advertisements in split second reactions whether to accept or reject them without analysing the text proper. We receive through the mail, radio, television and the Internet, countless flyers, pamphlets, brochures and advertisements, every second, every minute, everyday and have learnt to dispose and ignore the useless, and in the process, the bulk of it.

Graphic design is seen as a single use device—a disposable item with a short shelf-life. We have become very proficient discriminators, reading the texts in split-seconds in order to know whether it is junk or information. Even on the internet, banner advertising, once thought to be the generator of revenue, is now defunct due to its non-viability as readers acquired the sensitivity to scan and ignore. The reader once again has acquired an ability online to decipher the essential from the unnecessary, to know what not to read/ click. Hence, today's banner advertising strategies employ push technology to present their advertisements right into our faces, so that we are forced to click. But again, we look for the red button with the cross on it at the top right hand corner and within one second, the advertisement disappears without us even reading the content.

However, this acquired discriminatory instinct does not suggest a metalanguage. Instead, it suggests a survival instinct in which time has become a precious commodity in today's world and the reader has adopted a very functional albeit suppressive attitude towards non-relevant texts. It also explains how certain advertisements have adopted the façade of essential texts only to draw the reader to take a closer look inside. In this fast-paced environment, criticism is uncalled for because criticism requires thought and analysis, and in the sense of the word, time and effort to look deeper into the graphic design text, to look at the nuances, to read between the lines, to investigate the meaning and the contexts in which it derives from and to understand how it affects us as readers. Graphic design criticism is aborted with a simple click or sleight of the hand. The ubiquity of graphic design leads to a discriminatory instinct in readers, which ultimately leads to the non-necessity, and hence, inexistence of graphic design criticism.

Secondly, although design according to Barnard (2005) fulfils the functions of information, persuasion, decoration and magic, the penultimate function of design is still to serve its commercial purpose in the free economy, where a plethora of goods and services are waiting to be packaged and glamorised for mass consumption. Good design sells as evidenced by the results form the battle of the MP3 players: namely *Apple Ipod* and *Creative Zen*. Apple, with its sleek design, triumphs. The other common term which graphic design goes by, 'commercial art' suggests on one hand, the unceasing dialectics of whether graphic design is an art form or commercial conduit and the inextricability between graphic design and commerce. The majority of designers view themselves as commercial artists, purporting the modernist view that form follows function, that is the purpose which it serves is far more important than aesthetics.

Because of this obsession with practical and commercial ends, even as a topic of discussion within the graphic design industry, let alone the general public, graphic design criticism is a stranger. Design criticism is deemed by many practitioners and clients as irrelevant and unimportant in a pragmatic world where sales performance has become the measurement for effectiveness, distilled in the ubiquitous business vernacular line: 'what is the bottom line?' The underpinning implications and meanings of a design text are not the concerns of the company, rather, the final cost of the graphic design text (including printing and delivery costs) and the subsequent sales results are the final determinants of the cost effectiveness and in an unfair, albeit logical conclusion, the effectiveness of the graphic design text, thereby making graphic design criticism superfluous.

Lastly, the quality of fluidity/ephemerality makes graphic design difficult to define. As postulated earlier, technological developments have a significant impact on graphic design, changing the mode of operation as well as redefining the parameters and forms in which it exists in. The advancements in technology introduce new semiotic resources and systems for meaning-creation: typography is created by the invention of printing; image, photography; colour, lithographic printing; ease of manipulation of the various resources, the computer and sound and motion, Internet. The introduction of new semiotic resources and their

complementary systems constantly destabilise the position of graphic design criticism. There is an incessant need to seek new frameworks of analysis and to rewrite history in order to be comprehensive and relevant.

In contrast, criticisms in other social disciplines appear to encounter slight changes, mostly, changes which build on the current corpora of knowledge rather than the introduction of entirely new structural elements which redefines the nature of the discipline itself. The introduction of new semiotic resources has attracted other participants from other disciplines such as media and cultural studies to investigate graphic design texts without properly understanding its functions and inherent qualities. Graphic design becomes an ever-metamorphosising amoeba, 'structure-less', assimilating different organisms, and criticism becomes a microscope that constantly has to be refocused in order to 'see' accurately. The frustration in acquiring a tool of analysis and only to find itself redundant in the near future impedes the advancement of graphic design criticism.

In conclusion, the ubiquitous, functional and ephemeral strains which is imbued into graphic design, since the birth of advertising posters in the 19th century, have done much harm to graphic design criticism in general. The result is a graphic design industry that is acutely lacking in intellectual vigor and critical introspection and in which practitioners and students are preoccupied with the acquisition of new semiotic resources in order to emulate the latest style and market it to clients as the latest fad *sans* the unnecessary, superfluous and difficult critical analysis.

1.5. THE RENAISSANCE OF GRAPHIC DESIGN CRITICISM

However, to assert that there is virtually **no** graphic design criticism will be committing a fallacy as there **is** criticism within and without the practice. There has always been a certain amount of interest in graphic design texts outside the practice (which has been on the increase recently in response to the proliferation of multimedia texts on the Internet). This tends to occur within the academic domain in which critical texts like Gyorgy Kepes' (1951) *Language of Vision*, László Moholy-Nagy's (1947) *Vision in Motion*, Rudolf Arnheim's

(1974) *Art and Visual Perception* and Donis A. Dondis' (1974) *A Primer of Visual Literacy* have been written by educators and academics. Graphic design criticism also can be found in critical analyses of a specific genre—especially advertisements, the quintessential graphic design text, which has been investigated in Roland Barthes' (1985) *The Responsibility of Forms*, Judith Williamson's (1978) *Decoding Advertisements* and Erving Goffman's (1979) *Gender Advertisements* and Guy Cook's (1992, 2001) *The Discourse of Advertising.*

However, most of these texts are written by academics whose primary interest is how the graphic design text functions as a visual and communicative art form, using a whole gamut of methods ranging from psychology, sociology, cultural studies and linguistics. Holistically, the proposed methods and frameworks of analysis lack a sensitivity to the inherent qualities of graphic design and fail to distill the texts into their various components and elucidate the process of meaning creation found in multisemiotic text forms. Often, analysis is largely undertaken in a narrow contextual format—essentially within the context of the respective academic discipline (in which the academic has vested interest in), resulting in the graphic design text used as an accessory to validate a thesis or school of thought. Seldom, the graphic design text is analysed solely based on its own grounds as a text. This may be due to the fact that the writers view the graphic design text as manifestation and evidence within the existing diaspora of texts, rather than having a potentiality on society and culture. In Halliday and Matthiessen (2004), the texts are looked upon as 'artefacts' rather than accounting them as 'specimens'.

Within the design practice itself, in the 1920s, when Modernism become a widespread movement affecting fine arts, architecture, music and literature, graphic design was not spared. A critical theory of sorts surfaced under the auspice of disparate groups such as the *Bauhaus*, *de Stijl* and *Dada* movements. Against the crass commercialism of graphic design, it argues for an aesthetic that is responsible and sensitive to the cultural environment while reducing the form to its basic functional objectives. This theory was persistent and strident in avant-garde design publications addressing 'the rightness of form, the pros and cons of ornament, the ramifications of propaganda, and the concept of plagiarism versus influence'

Heller (in Bierut, 1999: x). The irony was that while it succeeded in convincing the design fraternity to adopt its theoretical position, it fails to allow the possibility of other dissenting voices to form at the sidelines. Its success was its ultimate failure as suggested by Kalman et al. (1994) in the sense that it was conclusive and prescriptive to the point that it established a *de facto* design style, known as the Swiss International Style, which persisted to this very day. The verisimilitude of this established style creates the inevitable backlash—the silencing of all criticism as designers and consumers accept this as the 'correct' form of design, leading to Heller's (in Bierut 1997: 2) conclusion that 'a demonstrative critical voice was simply unnecessary'.

This 'critical voice' was silenced until the 1980s when certain developments within the design industry induces it to speak once again. Contrary to expectations, the International Style did not wane but persisted until the arrival of Postmodernism which questions the established International style with all its rules and formulas, giving rise of the designer auteur—placing the designer on the pedestal of creativity, objectivity and decision. Sadokierski (2006: 52) posits that 'authorship lends an air of legitimacy, origination, and agency to the design profession, addressing the designer's potential to produce meaning as well as communicate it'. Together with the concept of the designer-auteur, the long-awaited new movement destablises the design world and calls for a viable theory in order to provide it with the necessary weight and mass. As a consequence, graphic design criticism is revived to provide a voice to the new movement and to provide the essential theoretical foundation.

Apart from the changes within, from a global perspective, the Enron scandal, Nike sweatshops and other corporate *faux pas* create a poignant disillusionment in the general public, culminating in books like Naomi Klein's (1999) famous anti-branding placard *No Logo*, Thomas Frank's (2000) *One Market Under God: Extreme Capitalism, Market Populism, and the End of Economic Democracy* and George Monbiot's (2001) *Captive State: The Corporate Takeover of Britain.* The anti-consumerist sentiments reached its zenith at the World Trade Organisation (WTO) Summit in 1999. Further disillusioned and disappointed at the inefficacy of their governments and fueled by the many propagandas purported by

activists, environmentalists, politicians and other religious groups, an unprecedented number of people (40,000 based on safe estimates) gathered in Seattle to form the largest protest during the WTO Summit of 1999.

In view of these developments, designers begin to question their roles as accomplices to the 'crime', having designed, branded and promoted the mega-corporations and their redundant products—these the feelings and thoughts gain affirmation from all grounds, take root and resulting in the creation of the 'First Things First (FTF) Manifesto' which was accepted by well-known graphic designers. It re-assesses the role of designers amidst the unbridled consumption in the free economy. Poynor in Bierut (2002: 122) captures the designer's sentiments by declaring that these are

> 'very propitious times for any kind of criticism, let alone design criticism… to be critical involves not taking things for granted, being skeptical, questioning what's there exposing limitations, taking issue, advancing a contrary view, puncturing myths… the critic will take the role of supporter and advocate'.

The anti-consumerism and disillusionment with governments and corporations augmented the already growing graphic design criticism, providing it with a stronger, idealistic and almost political tune. Together with this movement is a fresh call for graphic design to be recognised as a legitimate profession like architecture. Massimo and its proponents believe only through design criticism can graphic design gain its status as a profession, suggesting a tripartite synthesis of theory, practice and criticism: 'criticism will prevent, to a great extent, the superficial spreading of fads, or in any case will provide ground for their evaluation in the proper context. Graphic design will not be a profession until we have criticism' (in Bierut, 1999: 274). Heller (in Bierut, 1994: xiii) agrees with this proposition:

> 'Graphic design is indeed vaguely discernible; seen but not understood, consumed but not appreciated as part of a larger social, commercial, and cultural context… This has prompted the clamor for a body of criticism that will help legitimize the graphic design profession'.

Echoing these sentiments, McCoy (in Heller and Ballance, 2001: 7) cites Massimo Vignelli's design philosophy: 'theory as well as history and criticism are the essential trinity that distinguish a profession from a craft or trade'.

In response to all these developments, graphic design criticism grew out of its dormancy and gathered a very strong momentum as evidenced by the appearance of countless articles in established mainstream design magazines such as *Print*, *Communication Arts*, *I.D.*, *Metropolis*, *Typographic* and *Baseline* as well as in design journals such as *AIGA Journal of Graphic Design*, *Eye*, *Graphis*, *Looking Closer*, and *Emigre*. The virtual space is not spared from this avalanche of graphic design criticism with the establishment of specialised blogs dedicated to graphic design criticism: *Design Observer* (http://www.designobserver.com), *Speak Up* (http://www.underconsideration.com/speakup) and *typographica* (http://typographi.com). The significant difference this time round is that the critical writing is undertaken by design practitioners themselves.

1.6. THE SEARCH FOR A METALANGUAGE

However, the new critical voice of graphic design is unsure, often inconclusive and wavering in its stand, affected by graphic design's innate inhibitors of ubiquity, functionality and ephemerality. Heller (in Bierut, 1994: iv) laments that though the quantity of writing has increased but there is still an apparent lack of a consistent and comprehensive analytical tool or system:

> 'contemporary writers are grappling with the basic problem of how to develop a critical vocabulary, a few are adapting existing models, such as semiotics and French linguistic theory, others are following less academic forms. This leads to the curious conclusion that there is both too much and too little graphic design criticism today: too much undisciplined rhetoric and too little rigorous analysis'.

The result is a multifarious and almost cacophonic din of critical voices, sometimes, expressing the same view with an altogether different language although the subject matter and overall method may be similar. Concurring with this view, Crow (2003: 8) writes: 'the various practices that make up the visual arts have no theory of their own'.

The guidelines provided by astute critics did not help in the critique. Design educator, Steven Heller (in Bierut, 1994) in the first anthology of *Looking Closer*, suggests critics should look at the functional aspect of graphic design text—whether it is successful commercially while ignoring other functions of design. This is in contrast, in the second anthology, *Looking Closer 2*, in which he suggests, like afterthoughts, that the graphic design text should reveal 'hidden meanings' and be contextualised in a broader sense in order to differentiate between a 'good' and 'bad' text. The inconsistent and prescriptive recommendations create confusion rather than provide a plausible direction for the uninitiated design critic. Rick Poynor (in Bierut, 2002), another prominent design advocate, even suggests for critics to adopt 'critical journalism'—a combination of the here-and-now news reporting style and rigorous academic analysis without providing sufficient and clear guidelines of his suggested method. These vagueness and uncertainty has led to a quest for a suitable critical tool for the analysis of graphic design as a contained discipline.

The most common approach is to adopt the panacea of modern theories, semiotics or semiology. The current rhetoric is saturated with Saussurean or Peircean perspectives coupled with structuralist and poststructuralist theories as design critics find them relevant and easy to apply its amorphous concepts. The reason is that the arbitrary relationship between signifier and signified within the composite sign (Saussure 1959) corresponds to the relationship between a graphical text and its meaning. Using semiotics to analyse texts is not uncommon, in fact, it appears to be very suitable for a whole range of disciplines. Variant forms of semiotics, commonly subsumed together under the umbrella of structuralism, were used to analyse phonemics by the *Prague School*, namely, Roman Jakobson (1971); myths, kinship and food preparation by Claude Lévi-Strauss (1997, 2000, 2001); mathematics by Paul Benacerraf (2001); verbal art by Jan Mukarovsky (1997); theatre by Martin Esslin (1987). In the latter part of the 20th century with the advent of new semiotic codes, Roland Barthes (1977, 1985) used semiotics to analyse photography; Christian Metz (1992), Peter Wollen (1992) and Andrew Tudor (1974) analysed cinema; and John Fiske (1996) and David Tripp

(1986) analysed television. Therefore, it is not altogether surprising that graphic design criticism readily accepts semiotics as the answer to its theoretical needs.

This is witnessed by the publication of books that introduces and heralds the arrival of semiotics in design: Ellen Lupton and Abbott Miller's *Design Writing Research* (1996), David Crow's *Visible Signs* (2003), Ian Noble and Russell Bestley's *Visual Research* (2005) and Malcolm Barnard's *Graphic Design as Communication* (2005). Like many others, Crow (2003: 8). asserts that 'the terms and theories that are used to explain visual communication are borrowed from the study of language (linguistics) and the science of signs (semiotics)'. Design critics found comfort in semiotics and (post)structuralist theories as they dismantle the authority of the logos—the linguistic semiotic code and convey significance to the visual semiotic code, favouring it most of the times. The prominence of semiotics in graphic design criticism has led to Heller and Ballance (2001: 7) proclaiming that 'semiotics (has) become the first codified theory of graphic design, a major step in the evolution to professionalism'.

However, the over-reliance on semiotics cannot be ignored and the pitfalls in this rhetoric must be highlighted. Firstly, semiotics becoming the *de facto* mode of critical discourse in graphic text analysis (as the Swiss International Style is the de facto design style) will create a catch-22 situation whereby graphic design criticism is supposed to question the *de facto* design style while it is in itself the 'correct' form of critical discourse. Semiotics as the theoretical basis will thus become a subterfuge for uninspired and uncritical analyses. Secondly, there is always a tendency to focus on semiotic theory rather than the text in question as critics attempt to acquire and apply semiotic nomenclature in order to express their thoughts.. The lack of theorisation on semiotics by early proponents such as Pierce and Saussure has led to a need to create or rely on other theories such as communication theory, semantics, rhetoric and discourse analysis, resulting in an amalgamation of theories (Noble 2005). The semiotic analysis of the graphic design text is often difficult and perfunctory as semiotics was not designed to suit this purpose. Soar (in Bierut, 2002: 133) concludes that 'semiology was never conceived as a tool for design'.

Hence, there is a pressing need for a metalanguage which can be translated into a practical tool and system of analysis to address the theoretical needs and current flaws in existing graphic design criticism. In its formulation, it should be sufficiently flexible to handle the demands of the ubiquitous, functional and ephemeral qualities of graphic design. In order to cultivate a conducive environment for criticism to grow, the framework must also strike a difficult albeit important balance between theory and flexibility. This metalanguage is to be found in the SF framework which will be postulated and applied in the following chapters.

2. CHAPTER 2: REVIEWING EXISTING SF FRAMEWORKS

2.1. RATIONALE

It is an appropriate time to be retrospective about SFT. Halliday's seminal work, *An Introduction to Functional Grammar* (1985, 1994) has been updated in Halliday and Matthiessen's (2004) *An Introduction to Functional Grammar*, albeit a thicker third edition compared to the already 'short' second edition. Similarly, the more accessible *An Introduction to Systemic Functional Grammar* by Eggins (1994) has also taken a new lease of life in the second edition (2004). Martin and Rose's (2003) *Working with Discourse: Meaning Beyond the Clause* has expanded the work of Martin's (1992) *English Text: System and Structure*. Beyond the purely linguistic semiotic resource, Kress and van Leeuwen's (1996) seminal work, *Reading Images: the Grammar of Visual Design* has also been updated (2006). An updated version of O'Toole's *The Language of Displayed Art* (1994) is expected. The objective here, of course, is not to slight other SF researchers and their works which have contributed to SFG and SFT but instead, to provide an overview of what has taken place in the past decade or so, providing us with a sense of temporal-spatial significance to the time frame in relation to the development of SFT.

The abovementioned works provide the foundation on which SFT is built on today. Many SFT researchers have been inspired and base their theoretical positions and frameworks on these very texts (Lim, 2002, 2004; O'Halloran, 2004, 2005; Baldry and Thibault, 2006; Iedema, 2001, 2003; Royce, 1998, 1999 and Cheong, 1999, 2004). In their SF frameworks, they have adapted Halliday (1985, 1994, 2004), Martin (1992), Martin and Rose (2003), Kress and van Leeuwen (1996, 2006) and O'Toole (1994) to varying degrees. Similarly, these SF frameworks are highlighted because of their focus on multisemiocity and primarily in relation to printed texts (which is the focus on this dissertation). Secondly, these frameworks are helpful in my formulation of an appropriate framework for the analysis of graphic design texts. However, it is appropriate at this juncture **not** to propose another SF framework based on the 'canon' of SFT but instead to undertake a 'stocktaking' exercise, to review and further develop the models which have been proposed by the various SF researchers on the linguistic-

visual rhetoric. Besides reviewing their models, I will address certain issues which have surfaced and demand our immediate attention as an SF community. I will outline their differences in approach as well as the many similarities. Only after a critical review of the various SF theories, will I posit a SF framework which is suitable for the analysis of graphic design texts in the printed medium. The final proposed SF framework is not simply a synthesis of all the proposed frameworks but an enhancement and elaboration of the current frameworks, addressing pertinent issues and solving certain tautological problems. Finally, I hope that my position as a graphic designer and educator will in some way shed some light on the applicability of SFT on graphic design and its instantiations as texts. In summary, the following act as a timely stock-taking exercise to reinvestigate the already burgeoning number of SF frameworks and address the issues which have surfaced.

But I do understand that my approach will be limited in many ways, for example, I may not be able to capture the essence of the SF researcher's underpinnings completely and hence do an injustice to the various SF researchers. Another inherent weakness is that the list above is, understandably, not exhaustive in reference to research in multimodal texts of the printed medium, especially when it only retrieves works available in the English language and of the SF theoretical domain. While these two variables assist me in narrowing the available research, they have also restricted my breadth of coverage. In replacement for the lack in coverage, I hope I can compensate in terms of depth, however, failing which, the fault is entirely mine and not the various SF researchers and their frameworks. In the end, I hope I have represented their frameworks in their basic visceralities.

2.2. CRITICAL REVIEWS OF SF FRAMEWORKS

In this section, I intend to capture the theoretical underpinnings and idiosyncratic features of each proposed framework. These can be considered as important snapshots but as attested above, there are certain pitfalls in this approach. Firstly, snapshots are summaries which always do not do proper justice to the actual texts, hence, for a clearer and more complete picture, it is recommended that the reader refer to the researchers' actual texts. My aim is to

elucidate and foreground the approach undertaken by each SF researcher and highlight certain salient concepts which define their frameworks. At some points, I may seem to highlight certain inherent weaknesses but I will refrain from offering suggestions (which will come later). I aim to remain faithful to their terminology and to show what are they bringing to the SF 'table'.

2.2.1. LIM'S (2002, 2004) SF FRAMEWORK

(a)   Meta-model

Lim's (2002, 2004) theoretical framework stems from his interest in picture books, a sub-genre of children literature. Lim (2002) defines picture books as texts which co-deploy the semiotic resources of language and visual images and in which visual images are 'crucial and fundamental to the understanding of the plot in the narrative' (Lim, 2002: 9). Hence, in the analysis of a children's picture book, *Dominic Duck Goes to School* (hereafter, DDGS), Lim (2002, 2004) theorises a 'meta-model' called the Integrative Multi-semiotic Model (hereafter, IMM) which accounts for the intersemiosis between the dual semiotic resources of language and visual images in a printed text. The IMM, as displayed in Figure 2.1, is an abstract pictorial conception of the semiotic resources and their respective strata levels following Halliday (1996, 2005), Martin (1992) and Martin and Rose (2003).
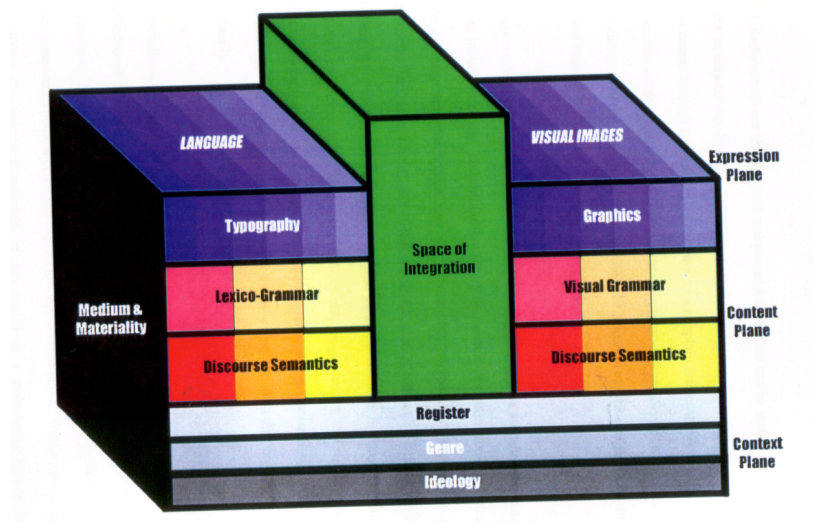
Figure 2.1: IMM Model
(reproduced from Lim, 2002: 37)

(b)   Meta-theory

Lim (2002, 2004) complements this 'meta-model' with a 'meta-theory' in which he theorises various systems and mechanisms which operate within the IMM. I will attempt to highlight certain theoretical underpinnings which defines his 'meta-model' and creates this 'meta-theory'. I will adopt the terms, 'meta-model' and 'meta-theory' for the other frameworks as well to underscore the fact that each SF researcher, to a certain extent, proposes a model of analysis (usually realised by a table, matrix or figure) and complements with a meta-theory—an overarching label for principles, systems, mechanisms and so on.

As displayed in Figure 2.1, in between the two semiotic resources exists the 'Space of Integration' (hereafter, SoI) which is 'the theoretical platform where intersemiosis occurs through contextualizing relations' (Lim, 2004: 223). Following O'Halloran (1999b), Lim also posits the concept of 'mechanism', a neutral term for the intersemiotic processes which function within the SoI. In this SoI, there are occurrences of semantic expansions or semantic multiplications through mechanisms of 'Homospatiality' (which occurs on the Expression plane) and 'Semiotic Metaphor' (which occurs on the Content plane), which are borrowed terms from O'Halloran (1999a, 1999b, 2003, 2005, forthcoming). Relationships which occur between the two semiotic resources are defined as 'co-contextualizing relations' (when they share or reflect similar meanings) or 're-contextualizing relations' (when they share divergent meanings) (Lim, 2004: 239).

Lim (2002, 2004) proposes the stratification of both the visual and language semiotic resources into their various strata of expression, content and context (Martin, 1992). On the expression stratum, Lim (2002, 2004) deploys the system of 'Typography' for the semiotic resource of language (see Figure 2.2) and the system of 'Graphics' for visuals (see Figure 2.3). On the grammar stratum, Hallidayan SFG is adopted for lexicogrammar while O'Toole's system for painting (albeit with slight modifications) is adopted for visual grammar. On the discourse semantics stratum, concepts from Martin (1992) and Martin and Rose (2003) are adopted for language while for the analysis of visual images at the discourse semantics stratum, Lim (2002) adapts Martin's concepts of 'visual taxis', 'visual taxonomy', 'visual

configuration' and 'visual reference'. For visual taxis, Lim (2002) adapts McCloud's (1993) transition scale which is developed from the study of narrative structures in comic strips.
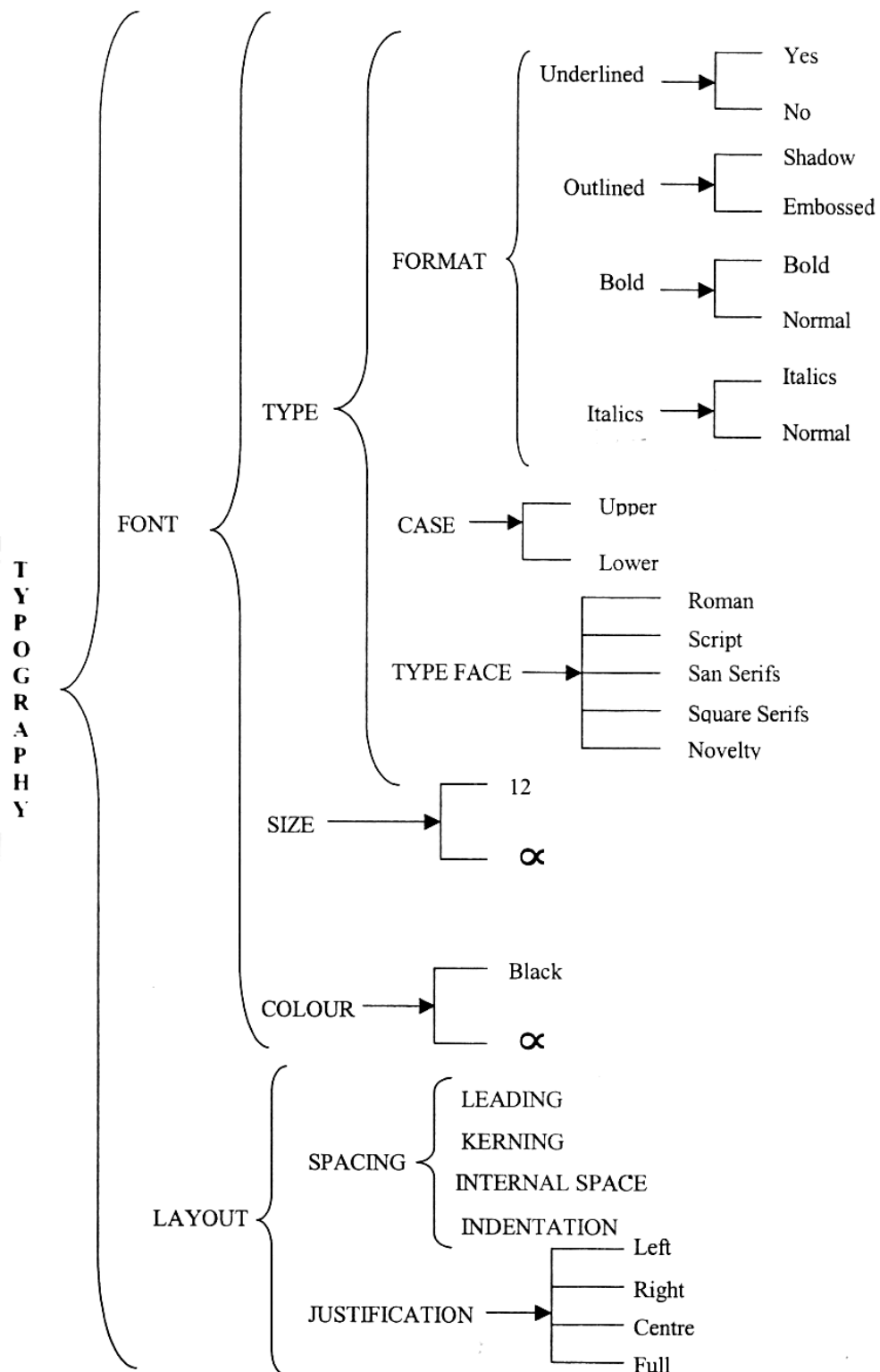
Figure 2.2: System Network for Typography
(reproduced from Lim, 2002: 55)
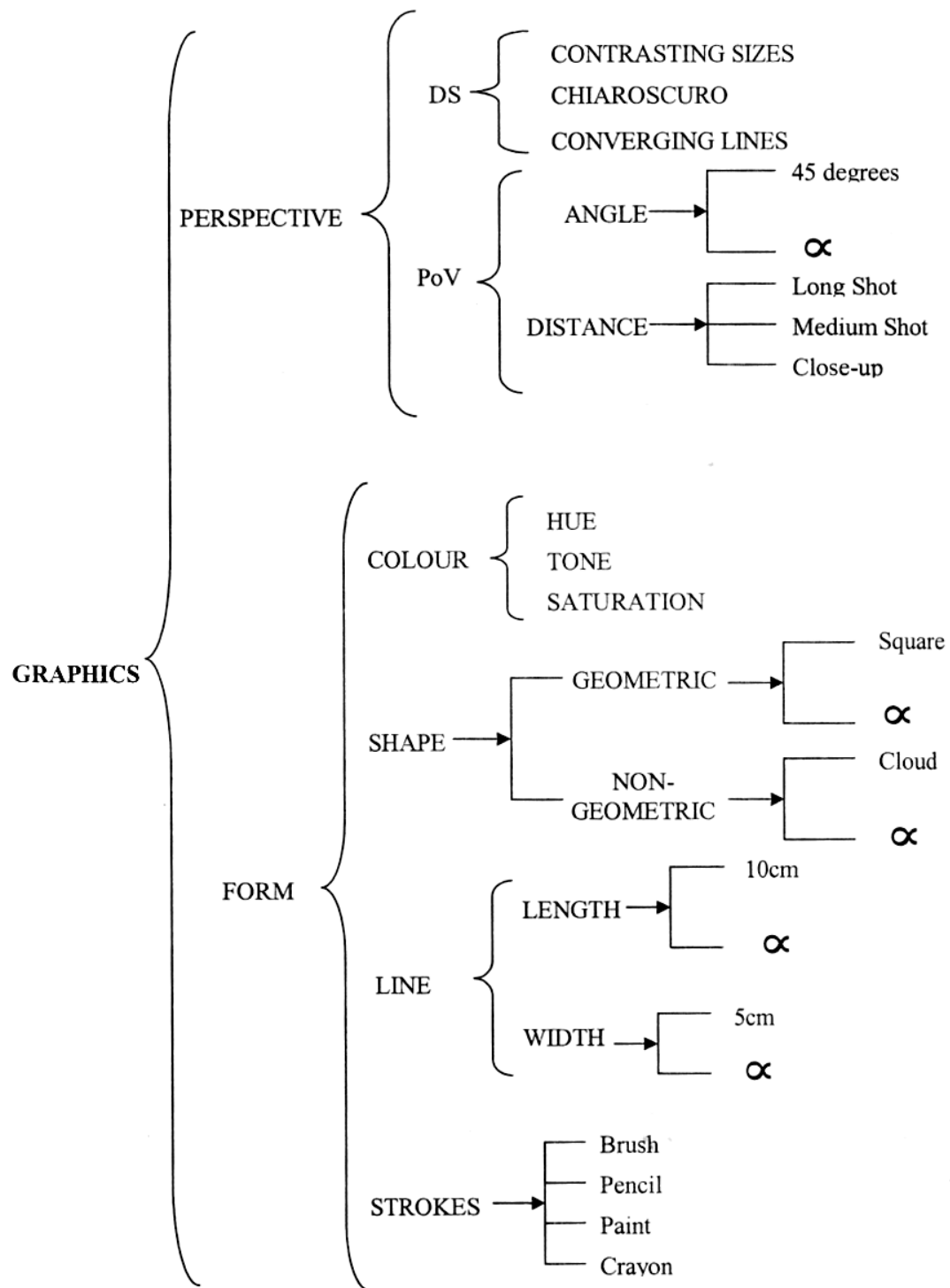
Figure 2.3: System Network for Graphics
(reproduced from Lim, 2002: 58)

Operating within these strata are what Lim (2002, 2004) termed as 'systems', described through system networks of possible configurations, typically realised as system network diagrams (refer to Figure 2.2 and 9.3). Related to systems functioning within the strata is the interesting concept of 'system-metafunction fidelity'. Lim (2002: 44) concurs with the common view that systems such as colour perform multiple roles encased in metafunctional qualities: representation, engagement and composition. In addition, Lim (2002: 223) proposes the concept of 'system-metafunction fidelity' which 'is used to signify the degree of dedication of a system towards a specific metafunction'. In other words, a system may have the tendency to dedicate itself towards a particular metafunction, for example, the colour 'red' on a fire engine serves primarily an engagement metafunction as it aims to attract the attention of drivers and pedestrians through its arresting colour.

In relation to system-metafunction fidelity is the concept of 'critical impetus', that is, 'the necessary conditions and circumstances which reveal which particular metafunctional meaning is likely to emerge from choices within systems on the Expression plane' (Lim, 2004: 232). If interpersonal meaning is the dominant resultant meaning at the expression stratum, it is said that salience has a critical impetus. If textual meaning predominates, the critical impetus is textual unity and cohesiveness. If ideational meaning predominates, the critical impetus are denotative and connotative values.

In the actual analysis of DDGS, Lim (2002) further employs the notion of 'structure' through mechanisms such as 'Narrative Structure', 'Componential Structure', 'Editorial Structure' and 'Generic Structure' (following Hasan, 1984, 1996). Narrative structure follows the sequential progression of a narrative: 'Abstract, Orientation, Complicating Action, Evaluation, Resolution and Coda' (Toolan, 1998). Componential structure divides the picture book into frames which are 'arbitrary segmentations' into 'smaller texts' (Lim, 2002: 81). Generic Structures are best realised as Generic Structure Potentials (hereafter, GSP) as proposed by Hasan (Halliday and Hasan, 1985); in a similar vein, Lim (2002: 87) proposes a GSP for picture books:

[(<Abstract>ˆ) Orientationˆ] Complicating Action ↰ˆ Evaluation [ˆ(Resolution).(Coda)].

Lim (2002: 93-135) manages to provide a comprehensive account of how the semiotic resources of language and visual images function vis-à-vis his meta-model and meta-theory in the analysis of DDGS. However, what is lacking is a substantial account of the intersemiosis between the two semiotic resources as captured visually by the SoI. Lim (2002) does not show how meanings are expanded or how the mechanisms of Semiotic Metaphor and Homospatiality actually operate. The only reference is the view that there is a dichotomy between the semiotic resources of language and visual images and thus resulting in re-contextualising relations. These relations, however, are not explained. Only the dichotomy is explicated: visual images are used in DDGS to represent experience while language is used as 'an interface between the child-reader and the world of Dominic Duck' (Lim, 2002: 136).

Another problem is the visual placement of the system of Typography. Although, Lim (2002: 28) views typography as 'a configuration of systems, with many sub-systems' as visually depicted in Figure 2.2, he places the system of Typography as the instantiation at the expression stratum in his IMM model as depicted in Figure 2.1. A system network, which is 'a configuration of systems' with 'paradigmatic options' cannot act as the surface instantiation of the semiotic resource of language. The selected options afforded by the system network are the actual instantiations of the semiotic resource of language. Hence, I suggest a reversion back to the original concepts of 'writing' or 'orthography' as the instantiation of language as proposed by Halliday (1984, 2004) to resolve this issue. Therefore, writing is the surface instantiations of the system network of Typography operating at the expression stratum.

In this brief summary of Lim's (2002, 2004) meta-model and meta-theory, I have elucidated his main theoretical underpinnings and original thoughts; those bearing relevance will be adopted later for my model. I have also raised certain problems and issues which I address in Chapter 3. I will embark on this similar tract for the remaining frameworks in the quest for a suitable framework for the analysis of graphic design texts of the printed medium.

2.2.2. O'HALLORAN'S (2005, FORTHCOMING) SF FRAMEWORK

(a)   Meta-model

In *Mathematical Discourse: Language, Symbolism and Visual Images*, O'Halloran's (2005) main interest is the functionality of the multisemiotic aspects of mathematical discourse—the three semiotic resources of mathematical language, mathematical symbolism and mathematical visual images, how they relate to one another in intersemiosis, thus forming expanded meanings and from an ideological perspective, how this actually 'mathematicizes' the human condition into artifices of 'abstraction, contextual independence, reason, objectivity and truth' (ibid.: 209).

Besides postulating the existence of three main semiotic resources within mathematical discourse, O'Halloran (2005, forthcoming) segmentises mathematical discourse into the various strata: ideology, genre, register, content and display. The strata of display is used instead of expression because "a new grammatical rank of 'expression' is introduced for mathematical symbolism" (O'Halloran, 2005: 98). O'Halloran's meta-model (as displayed in Table 2.1) can be considered as a macro-model, that is, a panoptic infrastructure containing hyper-models (as displayed in Tables 2.2 – 2.4 in the following pages). Hyper-models are then considered infrastructures which contain system networks, systems and mechanisms. The macro-model acts as the scaffolding while the hyper-models constitute the actual building divided into their respective levels and rooms. They are captured visually by the use of tables—'texualized visual displays' which carry 'textual ellipsis to the extreme' and employ 'spatial arrangement to compensate for the lack of grammatical constructions (O'Halloran, 2005: 124).

IDEOLOGY			
GENRE			
REGISTER			
CONTENT (Items)	◄—————— INTERSEMIOSIS ——————►		
	LANGUAGE	**MATHEMATICAL SYMBOLISM**	**MATHEMATICAL VISUAL IMAGES**	**OTHERS ITEMS**
	Discourse Semantics			
	Text	Inter-statemental relations	Inter-Visual Relations Work/Genre	For example: Photographs Maps Drawings Three-Dimensional Models Equipment and so forth
	Grammar			
	Clause complex Clause Word Group/ Phrase Word	Statements Clause Expressions Components	Episode Figure Parts	
DISPLAY	◄—————— INTERSEMIOSIS ——————►		
	Graphology and Typography		**Materiality**	

Table 2.1: SF Model for Mathematical Discourse
(reproduced from O'Halloran, 2005: 168)

Metafunction	Lexicogrammar	Discourse Systems
interpersonal	clause: MOOD; MODALIZATION; MODULATION; POLARITY; TAGGING; VOCATION; ELLIPSIS word group: PERSON; ATTITUDE (attitudinal modifiers, intensifiers); COMMENT (comment adjuncts); LEXIS (expressive words, stylistic organization of vocabulary)	NEGOTIATION (exchange rank including SPEECH FUNCTION at the move rank) *Structure*: Exchange Structure linking moves APPRAISAL *Structure*: surges, flows and falls mapped through word groups, phrases and clauses in text
textual	clause: THEME clause and word group: SUBSTITUTION; ELLIPSIS word group: DEIXIS (nominal)	IDENTIFICATION (phoricity, reference) *Structure*: reference chains linking participants
logical	clause complex: LOGICO-SEMANTIC RELATIONS and INTERDEPENDENCY	CONJUNCTION and CONTINUITY (based on classifications of LOGICO-SEMANTICS RELATIONS and semantic relations respectively) *Structure*: conjunctive reticula linking messages
experiential	clause: TRANSITIVITY; AGENCY word group: TENSE; LEXIS (lexical 'content'); collocation	IDEATION (lexical relations) *Structure*: lexical strings and nuclear relations linking message parts

Table 2.2: Metafunctional Organisation of Halliday's (1994) Lexicogrammatical Systems and Martin's (1992) and Martin and Rose's (2003) Discourse Systems (reproduced from O'Halloran, 2005: 64)

DISCOURSE SEMANTICS			
EXPERIENTIAL	**LOGICAL**	**INTERPERSONAL**	**TEXTUAL**
IDEATION • Activity Sequences consisting of Operative process and participant reconfigurations (progressive steps of simplification and solution) • Nuclear relations (participant and process) • Collocation (symbolic relations and strings through taxonomies, definitions, axioms and theorems) *Structure*: strings for tracing activity sequence reconfigurations	CONJUNCTION and CONTINUITY (based on EXPANSION) • Sequential placement of statements (explicitly marked when the logical connection is non-sequential) • Extension of TAXIS into long implication sequences *Structure*: conjunctive reticula	NEGOTIATION Exchange Structure and SPEECH FUNCTION at the move rank • Consists of moves and move-complexes *Structure*: Exchange Structure linking moves	IDENTIFICATION • Direct Repetition • Referential cohesion (based on definition, operational properties with explicit repetition of reference) • Positional notation (the sequential downward placement of statements and positional placement functional components) *Structure*: reference chains linking participants

INTER-STATEMENTAL RELATIONS			
EXPERIENTIAL	**LOGICAL**	**INTERPERSONAL**	**TEXTUAL**
• Positional notation to indicate continuations of Activity Sequences • Repetition of processes and participants in new configurations	EXPANSION • Conjunctions and cohesive conjunctions • Implicit and explicit conjunctions (external symbolic and linguistic conjunctive devices; internal substitution and operative properties) • Apposition • Parenthesis • Labelling	SPEECH FUNCTION (statements and limited forms of command) • Intricacy of symbolic representation • Abstractness (nature of participants, processes) • Discursive links (using verbal code of main text within the mathematical array) • Labelling	• Positional notation (the sequential downward placement of statements and positional placement functional components) • Dependent clauses (thematic or spatially marked) • Ellipsis (marked by spatial position) • Discursive links (using verbal code of main text within the mathematical array) • Labelling

Table 2.3a: Systems for Mathematical Symbolism
(reproduced from O'Halloran, 2005: 99-101)

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EXPERIENTIAL	LOGICAL	INTERPERSONAL	TEXTUAL
TRANSITIVITY • Processes (Operative, relational and existential) • Participants are rankshifted configurations of Operative processes • Circumstantial features (minor clauses, dependent clauses or fused within participant structure) • Ellipsis of Operative processes • Rule of Order of operations	• Rhetorical 'temporal' conjunctive relations realized through Rule of Order of operations and use of brackets	MOOD (with one symbol for the Finite and Predicator) • MODALITY (consistently high, implicit objective orientation) POLARITY (presence or absence of a slash through the process symbol) • Intricacy (embedded processes) • Abstractness (participants and processes)	• THEME (unmarked choice is Subject of the clause with marked case indicates steps in simplification) • Multiple Theme (textual element spatially placed) • Ellipsis (spatial positioning) • Dependent clauses (thematic or otherwise spatially separated) • Conventional spatial organization • Rule of Order and use of brackets for unfolding of Operative processes

EXPRESSIONS [[   ]]

EXPERIENTIAL	LOGICAL	INTERPERSONAL	TEXTUAL
• Operative processes (condensation occurs via high level of rankshift within and between participants) • Degree of rankshift indicated by [[ ]] • Circumstantial elements (through processes and fused participant structures • Ellipsis of Operative processes • Rule of Order of operations	• Rhetorical 'temporal' conjunctive relations realized through conventionalized Rule of Order of operations and use of brackets	• Intricacy (degree and explicitness of embedding) • Degree of abstractness (nature of participants and processes)	• Rule of Order and use of brackets for unfolding of Operative processes

Table 2.3b: Systems for Mathematical Symbolism
(reproduced from O'Halloran, 2005: 99-101)

COMPONENTS

EXPERIENTIAL	LOGICAL	INTERPERSONAL	TEXTUAL
• Restricted range of units in the nominal group (the absence of DEIXIS, attitudinal and experiential epithets) • Qualifiers (form part of the nominal group without the need for embedding as phrases) • Classifiers • Conventionalized use of specific symbols (numerals, Roman, Greek, Hebrew alphabet)	• Conventionalized combinatory practices	• Degree of abstractness • Degree of modification	• Function of constituents (spatial, serial position and brackets)

DISPLAY PLANE

EXPERIENTIAL	LOGICAL	INTERPERSONAL	TEXTUAL
• Variations in the form of case, font, scripts and size for special symbols, abbreviations, icons, punctuation, brackets, and combinations of symbols • Use of spatial and positional notation	• Spatial organization of symbolic text	• Style of production (hand written, computer generated) • Contrasts in font, script and size	• Spatial arrangement of text at each rank • Font style and format • Ellipsis of process

Table 2.3c: Systems for Mathematical Symbolism
(reproduced from O'Halloran, 2005: 99-101)

DISCOURSE SEMANTICS

SEQUENCE OF GRAPHS/ DIAGRAMS/ COMPUTER GRAPHICS	CONCEPTUAL DEVELOPMENT	ENGAGEMENT (Inter-Visual Relations)	THEMATIC DEVELOPMENT
	Development of mathematical content through sequences of Episodes, Relations, Figures and Parts	Discourse moves through visual sequence (through repetition and change in Episodes)	Textual organization for tracking participants, processes and relations
	LOGICAL RELATIONS EXTENSION in the form of elaboration, extension and enhancement (through multiple Time-Frames)		

GRAMMAR

Units	REPRESENTATIONAL/ EXPERIENTIAL	INTERPERSONAL	COMPOSITIONAL

GRAPHS/ DIAGRAMS/ COMPUTER GRAPHICS (Genre)	• Display of patterns of relations (as lines, curves and three-dimensional shapes)
	• Process types:
	  – Relational (graphs of functions)
	  – Transformational $x \rightarrow f \rightarrow y$
	• Perceptual Reality (for example, geometrical displays)
	• Mathematical Symbolic Reality (for example, Venn diagrams, data graphs)
	• Interplay of Episodes
	• Multiple Time-Frames with Temporal Unfolding through Spatiality
	• Comparisons of patterns of variation
	• Circumstance
	• Dynamic Temporal/Spatial Unfolding (Computer Graphics)
		• Metaphorical Narrative
		• Modality and the Degree of Idealization, Abstraction, Quantification
		• Accompanying text in the form of Caption, Title and Labelling which are emphasized by Size, Positioning, Underlining and Font
		• Colour
		• Line Width, Shading, Line Solidarity, Slope, Arrows
		• Rhythm
		• Curvature
		• Perspective
		• Framing
		• Style of Production
		• Nature of participants
		• Production process
		• Intricacy of display
		• Directionality
			• Gestalt: Framing, Horizontals, Verticals and Diagonals
			• Positioning
			• Perspective (2D, 3D)
			• Use of Lines and Curves
			• Inter-connections established through symbolism and language through Labels
			• Cohesion (Parallelism, Contrast, Rhythm)
			• Reference through language, symbolism)

Table 2.4a: Systems for Mathematical Visual Images
(reproduced from O'Halloran, 2005: 135-137)

GRAMMAR			
Units	**REPRESENTATIONAL/ EXPERIENTIAL**	**INTERPERSONAL**	**COMPOSITIONAL**
∖ EPISODE	LOGICAL RELATIONS • Spatial relations (from Interplay of Episodes) • Temporal relations (Multiple Time-Frames) • Spatial/temporal Relations • Types: Elaboration, extension and enhancement • Interplay of Actions or Relations between Figures • Portrayal of process (for example, relation as Curves or Lines)	• Prominence of Interplay (Size, Colour, Labelling, Framing, Prominence, Position and so forth) • Display of process (Line, Curve)	• Labelling of Interplay (through symbolism, language) • Portrayal of Process and Participants (relative Positioning, Size of Figure and salient features as displayed by Lines, Curves, Colour, Line Width, Shadings)
FIGURE	LOGICAL RELATIONS • Spatial relations (in Episodes) • Spatial/temporal Relations (Multiple Time-Frames) • Types: Elaboration, extension and enhancement • Participants • Circumstantial features	• Prominence of Figures (Size, Colour, Labelling, Framing, Prominence, Position and so forth)	• Labelling of Figure (through symbolism, language) • Stylistic Features (Size, Shape, Dynamics, Colour, and marking of Parts)
PARTS	• Title • Axes, Scale, Arrows • Labels • Lines, Curves, Shading, Intersetion Points • Slope	• Stylization • Conventionalization	• Textual markedness (through Labelling, Colour, Size and so forth)

Table 2.4b: Systems for Mathematical Visual Images
(reproduced from O'Halloran, 2005: 135-137)

DISPLAY			
GRAPHICS	• Variations in line width, dotted lines and arrows • Variations in font, scripts and size • Colour, Shading, Brightness and Hue	• Variations in line width, dotted lines and arrows • Variations in font, scripts and size • Colour • Stylization and production (computer generated, drawn and so forth)	• Perspective • Cohesiveness and Contrast (through Colour, Font, Size and so forth) • Spatial arrangement

Table 2.4c: Systems for Mathematical Visual Images
(reproduced from O'Halloran, 2005: 135-137)

(b)   *Meta-theory*

O'Halloran (2005) provides comprehensive SF systems for each semiotic resource at each strata level and each metafunction, resulting in a detailed theoretical model. For the semiotic resource of mathematical language, she employs Hallidayan SFL framework at the lexicogrammar strata and Martin's framework at the discourse-semantics strata (as displayed in Table 2.2). For the semiotic resource of mathematical symbolism, she modifies Halliday's and Martin's frameworks for mathematical language to address different phenomena which pertain to mathematical symbolism (see Tables 2.3a–2.3c). For the semiotic resource of mathematical visual images, she posits the concept of 'Inter-Visual Relations' at the discourse semantic stratum and employs O'Toole's framework for painting for the grammar stratum (see Tables 2.4a–2.4b).

In O'Halloran's (2005) proposal for systems relating to mathematical symbolism, she discovers the need to introduce certain terms in order to address specific processes and phenomena which relate to mathematical symbolism solely. For example, she proposes the term, 'Operative Process', to address 'the form of arithmetic operations and other processes found in the different fields of mathematics' (O'Halloran, 2005: 103). Relevant to the Operative process is the 'Rule of Order' which 'determines the sequence in which Operative processes are performed within statements and expressions' (ibid.: 111) and the concept of rankshifting which 'preserves process/ participant structures which may be reconfigured for the solution to problems' (ibid.: 108). O'Halloran (2005) also further stratifies the grammar of

mathematical symbolism into sub-strata levels of statements, clause, expressions and components.

Another interesting point to note is that in O'Halloran's (2005) consideration of what consists of mathematical visual images: 'abstract and statistical graphs, a range of genres of diagrams and computer-generated graphics' and diagrams used in the 'broadest sense' (ibid.: 133), she also considers 'Titles', 'Labels' and 'Captions' as elements of the mathematical visual image. She cites the fact that the 'mathematical visual images are typically multisemiotic texts' (ibid.). This is significant as she distinguishes semiotic resources not in terms of their categorical quality but more in terms of their predominance, salience and proliferation in the creation of meaning in mathematical discourse. Another anomaly is that while three semiotic resources are documented at length, there appears to be another semiotic resource. From Table 2.1, mathematical discourse is viewed as having four semiotic resources, with the addition of a miscellaneous category labeled as 'Others Items'. I address these issues in the definition of a semiotic resource in Chapter 3.

O'Halloran (2005) attempts to summarise the overarching functions of the various semiotic resources, providing an overview of each semiotic resource's idiosyncratic qualities. The semiotic resource of mathematical symbolism is marked by unambiguous meanings encoded in strategies which involve 'maximal economy and condensation' (ibid.: 97), directed towards a representation of the solution to the problem. The semiotic resource of language assists by providing an appropriate 'meta-discourse to contextualize the problem' while the semiotic resource of visual images show these relations in a 'spatial-temporal format' (ibid.: 158).

O'Halloran's (2005) extensive coverage of the three semiotic resources and how they function individually is primarily motivated by the belief that in order to understand the integrative process of intersemiosis, one needs to understand the three semiotic resource more fully. As a result of this understanding, O'Halloran (2005) posits the concepts of 'intrasemiosis', that is, 'meaning within the systems which constitute the grammar of each resource' and 'intersemiosis': 'meaning arising across semiotic choices' (ibid.: 158-9). In

order to understand intersemiosis, she develops intersemiotic systems and mechanisms to account for the co-textualising and re-contexualising relations, citing inspiration from Lim (2002, 2004), Royce (1998), Cheong (1999, 2004) and Thibault (2000). As a result, a comprehensive tabular configuration of systems and mechanisms working across three semiotic resources, four metafunctions and three stratal levels is proposed, as captured in Tables 2.5a–2.5d.

INTERSEMIOSIS ACROSS LANGUAGE, MATHEMATICAL SYMBOLISM AND VISUAL DISPLAY

Metafunction	Discourse	Grammar	Display
Experiential	**INTERSEMIOTIC IDEATION** Activity Sequences and relations which stretch across semiotic resources through direct repetition (for example, let AB terminate at C) and intersemiotic equivalence, synonymy, antonymy, hyponymy, meronymy and collocation (Royce, 1998b: 29). Taxonomies which stretch across resources (for example, types of triangles) **CAPTIONS** Use Captions which use multiple semiotic resources	**TRANSITIVITY RELATIONS** The use of relation processes to set up identifying relations across semiotic resources for example, let $AB = x$ Transitivity selections which overlap, for example, A and B have meaning in the grammar of visual images, and the grammar of language **LEXICALIZATION, SYMBOLIZATION and VISUALIZATION** Maintenance in process, participant and circumstance and agency configurations through: (i) Lexicalization of symbolic and visual functional elements (for example, 'distance' for 'h' and '——') (ii) Symbolization of lexical and visual functional elements (for example, 'h' for 'line' and '—') (iii) Visualization of lexical and symbolic functional elements (for example, '—' for distance and 'h') **SEMIOTIC METAPHOR** Shifts in functional status and introduction of new process, participants and circumstantial elements (for example, introduction of triangle visually which becomes symbolized and lexicalized), shifts in agency **LABELS** Use of Labels which use multiple semiotic resources	**JUXTAPOSITION** (for Experiential Relations) Use of space and position to create lexical, symbolic and visual relations **FONT** Use font style, size and colour for experiential meaning **COLOUR** Use of colour for experiential meaning

Table 2.5a: Systems for Intersemiosis
(reproduced from O'Halloran, 2005: 167-170)

INTERSEMIOSIS ACROSS LANGUAGE, MATHEMATICAL SYMBOLISM AND VISUAL DISPLAY

Metafunction	Discourse	Grammar	Display
Interpersonal	INTERSEMIOTIC NEGOTIATION The unfolding of discourse moves across semiotic resources using SPEECH FUNCTIONS, arrows, (to accommodate lack of gaze and so forth) LABELS and CAPTIONS Use of Labels which use multiple semiotic resources INTERSEMIOTIC APPRAISAL Appraisal across semiotic resources	SPEECH FUNCTION, MOOD Speech functions (including commands to view parts of the text) MODALITY Consistency of Modality across visual, verbal and symbolism POLARITY Displays of Polarity across resources SEMIOTIC METAPHOR Shifts in functional status of expression of modality across semiotic resources	STYLE OF PRODUCTION Consistency in style of production SALIENCE as directing discourse moves across text PROMINENCE as directing attention to verbal, visual and symbolic components FONT Use font style, size and colour for interpersonal meaning COLOUR Use of colour for interpersonal meaning

Table 2.5b: Systems for Intersemiosis
(reproduced from O'Halloran, 2005: 167-170)

**INTERSEMIOSIS ACROSS LANGUAGE, MATHEMATICAL SYMBOLISM
AND VISUAL DISPLAY**

Metafunction	Discourse	Grammar	Display
Textual	INTERSEMIOTIC IDENTIFICATION Cohesive devices for Intersemiotic Reference including elements which operate across resources through Direct Reference and Intersemiotic Repetition (for example, x) and semantic reference (for example, 'variable' and x) INTERSEMIOTIC MIXING Use of selections of different semiotic selections (for example, Δ ABC) DISCURSIVE LINKS across text CAPTIONS Use Captions which use multiple semiotic resources	INTERSEMIOTIC SUBSTITUTION Substitution of one term for another (for example, x for AB + for addition) INTERSEMIOTIC ADOPTION Use of functional element across semiotic resources (for example, x) DEIXIS Use of deictics in language (for example, 'this' curve) compensated by generalized participants in symbolism and visual display LABELS Use of Labels which use multiple semiotic resources	JUXTAPOSITION (Textual and Compositional Arrangement) Use of spatial position and layout to juxtapose and separate selections and items from each semiotic resource FRAMING to organize text FONT Use font style, size and colour for cohesive purposes COLOUR Use of colour for cohesion across text

Table 2.5c: Systems for Intersemiosis
(reproduced from O'Halloran, 2005: 167-170)

INTERSEMIOSIS ACROSS LANGUAGE, MATHEMATICAL SYMBOLISM AND VISUAL DISPLAY

Metafunction	Discourse	Grammar	Display
Logical	IMPLICATION SEQUENCES Cohesive and structural devices across semiotic resources (for example, linguistic and symbolic strutural Conjunctions, Conjunctive Adjuncts, and cohesive ties, and arrows pointing to other semiotic resources)	LOGICO-SEMANTICS and INTERDEPENDENCY Cohesive and conjunctive devices across semiotic resources INTERPLAY OF SPATIALITY and TEMPORALITY through visual, textual and symbolic transformations SEMIOTIC METAPHOR Shifts in functional status of logical relations across semiotic resources	SPATIAL POSITION Alignment of Items in the text in sequence FONT Use font style, size and colour for logical meaning COLOUR Use of colour to direct the sequence for the construction of logical relations

Table 2.5d: Systems for Intersemiosis
(reproduced from O'Halloran, 2005: 167-170)

O'Halloran (2005: 179) develops the Hallidayan concept of grammatical metaphor into semiotic metaphor, 'a phenomenon where an intersemiotic transition gives rise to a metaphorical expansion of meaning'. This mainly involves how new functional elements are created and how their status are changed as a result of their transference from a semiotic resource to another. O'Halloran (ibid.) also distinguishes between a parallel semiotic metaphor: 'an expanded semantic field but also one which is situated within the old' and divergent semiotic metaphor: 'the functional element is reconstrued into a new semantic field'. O'Halloran (2005: 172) provides examples of these metaphorical shifts in texts such as *Newton's Procedure for Drawing Tangents* and secondary school mathematics lesson in trigonometry (ibid.: 179).

Adopting and adapting a whole range of SF theories and frameworks, O'Halloran (2005) presents an exhaustive system for the analysis of mathematical discourse. The merit of her research does not simply rest in addressing intrasemiosis within the respective semiotic resources or intersemiosis between the semiotic resources but in her ability to develop a wide range of systems to account for intersemiosis and intrasemiosis at every metafunction and every strata level. As a result, her meta-model has become a complex and compendious SF framework accounting for meaning expansions which take place in mathematical discourse.

2.2.3. BALDRY AND THIBAULT'S (2006) SF FRAMEWORK

(a)   Meta-model

As suggested in the title, *Multimodal Transcription and Text Analysis: A multimedia toolkit and coursebook with associated on-line course*, Baldry and Thibault (2006: xv) presents a 'multipurpose toolkit, not a single tool for a single purpose'. Instead of positing frameworks which contain mechanisms and systems, they develop an eclectic approach in both their meta-theory and presentation of the meta-theory in the textbook. As a result, while there is no specific meta-model *per se,* the entire text can be considered as the meta-model.

(b)   Meta-theory

Baldry and Thibault (2006: xvi) believe that an integral part of analysis is the development of proper tools for transcription which is defined as 'a way of revealing both the codeployment of semiotic resources and their dynamic unfolding in time along textually constrained and enabled pathways or trajectories'. These tools become important tenets to their meta-model and meta-theory. I will investigate some of these tools since they are paramount to their toolkit. A primary tool for their toolkit is the 'resource integration principle' which states that 'resources are not simply juxtaposed as separate modes of meaning making but are combined and integrated to form a complex whole which cannot be reduced to, or explained in terms of the mere sum of its separate parts' (ibid.: 18). Another relevant principle is the 'meaning-compression principle' which refers to 'the effect of the interaction of smaller-scale semiotic resources on higher scalar levels where meaning is observed and interpreted', for example, the simplification and economization of 'higher scaler reality' can result in bite-sized, easily digestible visual forms (ibid.: 19).

An important tool for transcription is the notion of clustering. A 'cluster' refers to the aggregation of various items within a text (which can employ any semiotic resource) based on their spatial proximity to one another. Nesting of clusters are acceptable: 'larger-scale items' can contain 'smaller-scale ones' (ibid.: 31). A predominant cluster which holds a number of clusters is termed as 'supercluster'. Baldry and Thibault attest that the formation of this concept reflects the focus on the interconnectivity between disparate elements within a multimodal text. The temporal-narrative derivative of cluster is known as a 'phase', defined as 'a set of copatterned semiotic selections that are codeployed in a consistent way over a given stretch of text' (ibid.:47). Phases are viewed as units which form a text and can be enacted in a narrative or in a chronological sequence (similar to storyboards in advertising). Finally, in order to organise the differing sizes of phases: (visual transitivity frame, shot, subphase, phase, macrophase, whole text) and clusters: (subcluster, cluster, supercluster), Baldry and Thibault (ibid.: 144) introduces the concept of 'scalar levels': 'a hierarchal structure'.

In their analysis of comic strips, Baldry and Thibault (2005: 14) posit the view that the narrative structure is similar to the discourse stratum in linguistic texts (Martin 1992, Martin and Rose, 2003) and can be derived from visual cues based on certain conditions such as a chronological timeline and the consistency of participants' identities throughout the transitions.

In the formulation of tools and concepts for their tool kit, Baldry and Thibault (2006) refers to a number of sources: including Kress and Van Leeuwen (1996) for the analysis of visual grammar, Bakhtin (1986) for the concepts of primary and secondary genres, Halliday (1978) for metafunctions and lexicogrammatical analysis, Malinowski (1923) and Firth (1957) for contexts of situation and culture, Lemke (1985) and Thibault (1986, 1990) for intertextuality, Martin (1992) for thematic development and textual periodicity and Gibson (1986) for the ecological theory of visual perception, notably the optic array.

Baldry and Thibault's (2006: 4) view semiotic resources as possessing a surreal-dynamism preventing them to be analysed with a discrete framework: 'different semiotic modalities adopt different organizational principles for creating meanings. Different semiotic modalities make different meanings in different ways according to the different media of expression they use'. Indeed, the strength of their approach lies in the adoption of a general stance and applying tools whenever there is the need to address certain issues. They termed their approach as 'an integrated approach', in contrast to the general SF approach 'which pulls out and isolates single features and focuses on them' (ibid.).

2.2.4.   IEDEMA'S SF FRAMEWORK (2001, 2003)

(a)   Meta-model

Iedema (2003: 1) focuses on the meta-model of resemiotization in which he posits that it is able to provide the analytical means for 'tracing how semiotics are translated from one into the other' and 'asking why these semiotics… are mobilized to do certain things at certain times'. In effect, Iedema (ibid: 41) is concerned not just about the text, the final product *per se* but the dynamic processes involved in the creation of the text—how 'meaning-

making shifts from context to context, from practice to practice, or from one stage of a practice to the next'.

(b)   Meta-theory

Iedema (ibid.: 48) believes that resemiotization 'opens up different modalities of human experience', creating a refocus on 'materiality' and the 'history or representation'. Due to their intrinsic affordances, semiotics (Iedema's term for semiotic resources) reshape the meaning when an element is transferred from another. Besides an expansion in meaning, he also focuses on the material logic, i.e. the expression plane. Iedema's (ibid.: 49) concern is not simply about the advantages and disadvantages of a medium but into the design process as well as 'the material and rematerializing history'.

The deliberation is on 'supra-logogenetic' questions about how and why the 'meaning-maker' creates the 'multimodal construct'. Iedema (ibid.) calls for a refocus from the reader's perspective to the creator's perspective, from instantial semiotics at the expression level to the creation process: 'the coincidences and the compromises which played a role in its inception'. Iedema (2001: 33) also stresses the fact that we need to look at how each resemiotization transfers meanings from one semiotic mode into one which is intrinsically different from the other: "transposition between different semiotics inevitably introduces discrepancy, and resemiotization is necessarily a process which produces not exact likeness, but which represents 'a multi-channel set of directions'; that is a (semiotic) metaphor".

In summary, Iedema (2003: 50) proposes: 'multimodality re-emphasizes the multi-semiotic nature of representation, resemiotization seeks to underscore the material and historicized dimensions of representation. Taken together, these perspectives comprise a powerful toolkit for doing socially relevant, multi-semiotic discourse analysis'. Although resemiotization remains a theoretical construct with a lack of concrete tools or frameworks, it manages to address the ideological implications in the analysis of the multisemiotic discourse (for example, the New South Wales Department of Health mental hospital building project

was analysed). Resemiotization also draws our attention to an area which needs more research, namely the process of the creation of the multimodal text and the materiality and medium of the text. Iedema's (2001, 2003) theoretical basis serves as a reminder for us to go beyond the artifact of the text into unexplored terrain of process and materialisation within social semiotics.

2.2.5. ROYCE'S (1998, 1999, 2002) SF FRAMEWORK

(a) Meta-model

Royce's (1999) interest in multimodal texts arose out of his involvement in the teaching of economics in which the economics discourse employ the dual semiotic resource modes of visual and verbal meanings. Subsequently, Royce (1998: 26) builds his meta-model on the foundational concept of 'intersemiotic complementarity', which is a relationship in which 'visual and verbal modes semantically complement each other to produce a single textual phenomenon'. The analytical framework is presented as Table 2.6.

METAFUNCTION	VISUAL MEANINGS	INTERSEMIOTIC COMPLEMENTARITY	VERBAL MEANINGS
IDEATIONAL	Variations occur according to the coding orientation. In the **Naturalistic** coding we can look at: Identification : who or what Activity : what action Circumstances where, who with, by what means Attributes the qualities and characteristics In the **Mathematical** coding we can look at: Identification : what Relational Activity : what is the relation Circumstances : where, what with, by what means Attributes: qualities and characteristics	Various lexico-semantic ways of relating the experiential and logical content or subject matter represented or projected in both visual and verbal modes through the intersemiotic sense relations of: • Repetition: identical experiential meaning. • Synonymy: the same or similar experiential meaning. • Antonymy: opposite experiential meaning. • Meronymy: the relation between the part and whole of something. • Hyponymy: the relation between a general class of something and its sub-classes. • Collocation: an expectancy or high probability to co-occur in a field or subject area.	Lexical elements which relate to the visual meanings. These lexical items arise according to: Identification (participants): who or what is involved in any activity? Activity (processes): what action is taking place, events, states, types of behaviour? Circumstances: where, who with, and by what means are the activities being carried out? Attributes: what are the qualities and characteristics of the participants?
INTERPERSONAL	Variations occur according to the Coding Orientation. In the Naturalistic Coding - it is a continua of the use of: Address Involvement & Power Social Distance Modality Markers In the Mathematical Coding - it is a continua of the use of: Involvement & Power Modality Markers	Various ways of intersemiotically relating the reader/viewer and the text through MOOD (Address via offers, commands, statements, questions) and MODALITY (Attitude re something as real or unreal, true or false, possible or impossible, necessary or unnecessary, and other attitudinal positions) through the intersemiotic relations of: • Reinforcement of address: an identical form of address. • Attitudinal congruence: a similar kind of attitude. • Attitudinal dissonance: an opposite or ironic attitude.	Elements of the clause as exchange which relate to visual meanings. These arise according to: The MOOD element in the clause realising speech function The MODALITY features of the clause which express attitudes. Modalisation views on the possibility, probability, and certainty of the Proposition, as well as the use Comment Adjuncts. Also the use of attitudinal Epithets in the form of subjective adjectives.
COMPOSITIONAL	Variations in visual meanings occur according to choices made in terms of: Information Value Salience Framing (weak and strong).	Various ways of mapping the modes to realise a coherent layout or composition by • Information Valuation on the page • Salience on the page • Degree of framing of elements on the page • Inter-Visual synonymy • Reading Path	The body copy as an orthographic whole realised by various structuring principles: Information Value Salience Framing (weak and strong).

Table 2.6: Systems for Visual and Verbal Meanings and Intersemiotic Complementarity
(reproduced from Royce, 1999: 185)

(b)   Meta-theory

Intersemiotic complementarity is not additive but synergistic in nature, that is, the total effect is greater than the sum of its parts. It is manifested when ideational meanings in both modes interact with each other lexico-semantically through intersemiotic sense relations of 'repetition', 'synonymy', 'antonymy', 'hyponymy', 'meronymy' and 'collocation, or when interpersonal meanings are related through 'intersemiotic reinforcement of MOOD', 'intersemiotic attitudinal congruence' and 'attitudinal dissonance relations', or when textual meanings are integrated through relations of 'information value', 'salience', 'visual framing', 'visual synonymy' and 'reading paths'. Royce employs Hallidayan metafunctions, O'Toole's metafunctions and rank scale, Kress and van Leeuwen's visual grammar and others (for example, Arnheim, 1974, 1988; Dondis, 1973 and Uspensky, 1973) to formulate a comprehensive framework to account for intersemiotic complementarity.

For ideational intersemiotic complementarity, Royce confers (both obvious and implied) lexical items on visual images and then subsequently matches these lexical items with words found in the verbal mode using sense relations. For interpersonal intersemiotic complemetarity, Royce applies the notion of Image acts ('Address', 'Involvement and Power', 'Social Distance', 'Modality') on visual images and mathematical images (Kress and van Leeuwen, 1996, 2006) and matches them to verbal equivalents which are analysed by Halliday's notions of speech functions of MOOD and MODALITY; these matching tools include reinforcement of address, attitudinal congruence and attitudinal dissonance (see Royce 1999: 165-166). Finally, for textual intersemiotic complementarity, he looks at how the modes realise a coherent layout based on 'Information Valuation', 'Salience', 'Degree of Framing of elements' and 'Inter-visual Synonymy'.

Royce (1999) also stratifies the visual mode into three levels: 'Semantics' (systems of visual meanings), 'Visual Grammar' (systems of visual design) and 'Representational Symbology' (systems of display elements) situated in extravisual levels of contexts of situation and culture. Representational symbology refers to 'the ways that visual signs and symbols (or works) are produced through the use of various primary display elements'

(Royce, 1999: 120); these primary display elements are attributed to Dondis' (1973) theory of visual literacy. Visual grammar relates "to the ways that the various systems of display elements in Representational Symbology are combined to realise visual message 'syntagms', or the ways in which visual elements are organized into recognizable structures" (ibid.: 121). At the level of semantics, Royce (1999: 139) conceptualises the concept of 'Visual Message Element', which provides 'the reference point for the examination of the verbal aspect of the multimodal text'. They carry 'semantic properties' and relate to their ideational and representational features.

On the surface, Royce (1998, 1999, 2003) seems to be selective as to what systems and mechanisms are at work during intersemiotic complementarity. However, this is balanced by a framework which conveys precision and clarity. Royce (1999) accounts for how each mechanism can work at the semantics stratum, for example, for ideational intersemiotic complementarity, he gives specific examples of plausible lexico-semantic relations between visual and verbal meanings in exact terms (see Royce 1999: 142-145). It is recognised that Royce is able to formulate an SF framework and apply them comprehensively across genres of texts which co-deploy the visual and verbal modes (Royce, 1998, 1999, 2003), especially at the semantics stratum where intersemiotic complementarity occurs.

2.2.6.   CHEONG'S (1999, 2004) SF FRAMEWORK

(a)   Meta-model

Cheong (1999, 2004) develops a meta-model (refer to Table 2.7) to account for how language and visual images collaborate together in order to bring across 'the sales message' in print advertisements.

	Ideational	Compositional	Interpersonal
Strategies for meaning-making in a multi-semiotic text	1. Bi-directional Investment of meaning 2. Contextualization Propensity 3. Interpretative Space 4. Semantic Effervescence 5. Visual Metaphor	1. Zones of Consumption • Immediate Zones of Consumption • Delayed Zones of Consumption • Non-consumption Zones 2. Supra-Theme, Macro-Theme, Hyper-Theme and Theme	1. Competing Modalities 2. Collaborating Modalities 3. Engagement 4. Positive and Negative Affective Energies 5. Epicentre of Engagement 6. Tone of Voice
Generic Structure Potential of a print advertisement	Lead ^ (Display) ^ Emblem ^ (Announcement) ^ (Enhancer) ^ (Tag) ^ (Call-and-Visit Information)		

Table 2.7: Cheong's Proposed Model
(reproduced from Cheong, 1999: 4)

(b)   Meta-theory

Cheong (1999, 2004) adopts Hallidayan notions that there are three simultaneous strands of meaning functioning across the text. Underlying these strands of meaning is what she conceives as the primary objective of advertisements, realised as a 'Generic Structure Potential' (Halliday and Hasan, 1985):

Lead^(Display)^Emblem^(Announcement)^(Enhancer)^(Tag)^(Call-and-Visit Information).

The 'Lead' is considered as 'the interpersonally most salient in size, position, colour' drawing the reader into the advertisement (Cheong, 1999: 8). Cheong (1999) further separates the Lead into the 'Locus of Attention' (LoA) and 'Complements to the Locus of Attention' (Comp.LoA) while postulating that the Locus of Attention as the predominant salient element within the Lead while the Complements to the Locus of Attention act as backgrounding components to enhance the salience of the LoA. The LoA is also deemed to possess significant ideational meanings and has the propensity to become a 'Visual Metaphor', 'a visual compression of the linguistic meaning' (ibid.: 14). The 'Emblem' is conceived as 'the stamp of authority' and usually realised visually as the logo of the product/ service. The 'Announcement' is further separated into the 'Primary Announcement': 'the interpersonally most salient Announcement' and the 'Secondary Announcement': 'less interpersonally salient

Annoucement'. The 'Enhancer' is a linguistic item which 'builds on or modifies the meaning emanated through the interaction between the Lead and the Announcement' (ibid.: 21). The 'Tag' is 'information about a product/ service that are not included in the Enhancer' and finally 'Call-and-Visit Information' is 'contact information' citing the availability of the product/ service (ibid.: 22-23).

For ideational meanings, Cheong (1999, 2004) postulates a consequential progression of how meanings are received and perceived by a reader. To create the impetus, the interaction between the two modes of semiosis (language and visual images) creates a 'Bi-directional Investment of meaning', determining the 'Contextualization Propensity' [which is defined as 'the degree/ extent which linguistic items in a print advertisement… contextualises the meaning of the visual images' (Cheong, 1999: 44)] which limits 'Semantic Effervesence' (the potential for plausible meanings) thereby affecting directly consumers' 'Interpretative Space' (an abstract spatial notion of the amount of plausible interpretations by the consumer).

For compositional meanings, Cheong (1999, 2004) develops the concept of 'Zone of Consumption' (ZoC) which is derived from Goldman (1992). The ZoC comprises of the 'Immediate Zones of Consumption' [defined as 'area or space within an advertisement vested with Ideational and Interpersonal Salience' (Cheong, 1999: 58)], 'Delayed Zones of Consumption' (which have less salient qualities) and 'Non-consumption Zones' (which primarily refer to the Complements to the LoA). Further exploring compositional meanings, she adopts Martin's conceptualization of Hyper and Macro-Themes while formulating 'Supra-Theme' which refers to 'the overarching Theme under which Macro-Themes can be subsumed' (ibid.: 80).

For interpersonal meanings, Cheong (1999, 2004) employs Kress and van Leeuwen's (1996, 2006) concepts of 'Centre/ Margin' relations and 'Modalities' (both competing and collaborating), White's (1999) 'Appraisal Theory' on 'Negative and Positive Affective Energies'. Cheong (1999: 87) further formulates three conceptions: 'Engagement', defined as 'the extent/ degree to which viewers of an advertisement interlock and interact affectively with the various components'; 'Epicentre of Engagement', defined as 'element/s in the Lead

which is the most attention-arresting… evoke/s the most Interpersonally intense meanings' (ibid.: 91); 'Tone of Voice', defined as 'a conscious and deliberate choice of the advertisers… to achieve certain aesthetic effect that will persuade recipients… to purchase the produce/ service' (ibid.: 93).

While her immediate field of study is on advertisements, using advertising-centric terms such as 'consumption', 'lead', and 'call-and-visit information', certain portions of her meta-theory are relevant and helpful in the analysis of the verbal-visual rhetoric. For example, Cheong (1999, 2004) manages to account for a consequential progression of how the bi-directional interaction of meanings from two modes affect the reader's meaning potentiality for interpretation.

2.3. CONCLUSION

In reviewing the various SF researchers' framework in terms of meta-model and meta-theory, I have attempted to capture the salient points which underscore their SF frameworks. I raise certain issues which are addressed in Chapter 3. Suggestions are offered for these issues which can lead to further questioning and research. The issues raised and the recommendations, in effect, add to the current SF research and will eventually lead to the formulation of my SF framework which embraces the relevant points of these SF frameworks while addresses their pertinent issues.

3. CHAPTER 3: ADDRESSING ISSUES

3.1. SF TERMINOLOGY

What's in a name? that which we call a rose

By any other name would smell as sweet.

(in Shakespeare, W. *Romeo and Juliet*)

When Juliet utters this phrase, she laments on that which separates her and Romeo is simply about names. Names do not matter to her, only the person, the essence of Romeo. Unfortunately, for us, names do matter. While the context of love permits such an utterance, our context of academic research disallows such vagueness in nomenclature. Academic writing is a highly marked genre which requires precision in nomenclature. Nomenclature is defined as 'a system of names used in an art or science' or 'the procedure of assigning names to the kinds and groups of organisms listed in a taxonomic classification' (Dictionary.com).

As a result, Sidiropoulou (2006) comments on the lack of explication of theoretical entities in *Multimodal Discourse Analysis* (O'Halloran, 2004), citing the example of the interchangeable usage of terms such as codes, modes and modalities in Pang (2004). This terminological issue is also raised by SF researchers, for example, Iedema (2003: 50) notes that he "uses the term 'semiotic' even though the term 'multi-modality would require (him) to use 'mode' ". The difficulty that arises when referring to writing as a 'mode' due to its multi-modal nature is not circumvented by using the term 'semiotic' '. Iedema (ibid.) concludes with 'but I do not have the space here to address and resolve this terminological issue'. Again, Levine and Scollon (2004: 2) grapples with this issue: 'One of the problems of GURT (Georgetown University Round Table) 2002… is the question of how we should understand words such as multimodality or, more simply, modality'.

Some SF terms are not problematic because of the amount of research done to define the term, for example, the SF concepts of 'text' and 'context' are concretised through the work done by Hasan (1996) and 'metafunction' by Halliday (1994). For terms which have not

concretised, there is an urgent to address these terms which have gained prominence through their proliferated usage in many SF frameworks. While we use them in abundance, we have not actually come to a definite conclusion on what they actually mean and what we actually mean. In a limited manner, contextual clues may provide us with the meanings of these terms. However, this is not feasible in the long term for SF research. As an SF community, we need establish a nomenclature in order for the exchange of knowledge between SF researchers and other academics from other disciplines. What is proposed here are only first steps in the concretisation of SF terms. The intention here is not to 'canonise' theories or concepts but to have a consistent terminology and nomenclature for the SF community so that we can understand one another clearly.

While Pang (in O'Halloran, 2004) may be accused of terminological vagueness, O'Halloran (2005: 20) has addressed this issue directly and evidently:

> 'there is a confusion over the use of the terms 'mode' versus 'semiotic', and, consequently, 'multi-modal' versus 'multisemiotic'. Given that this field represents a relatively new area of research, this is to be expected as the much needed frameworks undergo development'.

O'Halloran (2005) proceeds to define terms such as mode, medium, genre and so on. I will build on this impetus and continue to theorise the various proposed SF terms as well as introduce other SF terms which require terminological investigation. This eventually will bear certain significance in my proposal of an SF framework.

The direction which I take is to refer to root words and its derivatives. This will provide a much needed clarity because for a single root word, there is a limited amount of derivatives which one can create from. As a result, there seems to be an overlapping in meanings for each SF term. To exacerbate the problem, while not synonymous, the overlapping meanings are not dissimilar but, in fact, similar to varying degrees.

3.1.1. DEFINING MODE

'Mode' used in the original sense of SFG, refers to 'the channel of communication which is enacted in a speech situation', for example, lectures, seminars, classroom lessons and so on (Cobley, 2001: 223). In register theory, mode functions as a complement to tenor and register and is defined as the role language is playing in an interaction (Halliday and Hasan, 1985). It is conceptualised within a monomodal environment in which language is considered primarily a spoken discourse. This probably explains how 'mode' becomes an interchangeable term for 'semiotic resource'. Monomodal discourse employs a single mode while multimodal discourse employs more than one mode. This has led to Kress and van Leeuwen (2002: 343) to define a mode as 'a semiotic resource – a mode, which, like other modes, is multifunctional in its uses in the culturally located making of signs'. O'Halloran (2005: 20) challenges this view and proposes a return to the original sense of the word as conceived by Halliday and Hasan (1985): 'this sense… is concerned with the nature of the action of semiosis; that is, whether it is auditory, visual or tactile, for example'.

At this point, it is important to relate this to the SF term, 'multimodality' which seems to have created this confusion of what is actually a 'mode'. Iedema (2003: 32) claims that the term, 'multimodality' originates from Kress and van Leeuwen (1996). However, the term, 'multimodality' exists before that, and is not restricted to the SF or linguistics domain, as other 'modes' (for the lack of a better word) also exist outside of the field of traditional linguistics. For example, 'multimodal transport' refers to transportation which employs at least two modes of transport, such as shipping by rail and by sea (United Nations, 1984), 'multimodal interaction' refers to the use of more than one mode of interface in the design of computerised user interfaces (Cohen et. al. in Maybury and Wahlster, 1998) and 'multimodal therapy' refers to the use of more than one mode of therapy in medicine (Snow and Clark, 1992) and psychotherapy (Palmer, 2000). As a result of the proliferation of the term, 'multimodality' in other fields, the term, 'mode' gains currency in SF theory and is now interchangeably used to mean 'semiotic resource'.

Before I propose a more precise nomenclature, there is another word which is derived from the root word, 'mode' and forms part of 'multimodality', that is, the SF term, 'modality' which further complicates the terminological conundrum. Again, in the traditional Hallidayan sense, modality refers to 'the area of meaning that lies between yes and no – the intermediate ground between positive and negative polarity' (Halliday and Matthiessen, 2006: 618). In this case, it serves as a collective noun to contain the systems of modalization and modulation (Eggins, 2006). Kress and van Leeuwen (2006: 155) keeps the traditional sense of the word and refers to 'modality' in their visual grammar as 'the truth value or credibility of… statements about the world'. However, in SF theory, many SF researchers have used the term, 'modality' interchangeably with 'mode', for example, Lim (2004: 240) states: 'Intersemiosis is therefore a result of the contextualizing relations between the two semiotic modalities… one modality seems to reflect the meaning of the other' and Baldry and Thibault (2006) observes: 'different semiotic modalities make different meanings in different ways according to the different media of expression they use'. This is, in a way, inevitable—when we split the word, 'multimodality', we derive two morphemes, 'multi' and 'modality' and hence, the meaning of 'many modalities'.

With such confounded complications in terminology, it is inevitable for an SF researcher to observe:

> "One of the problems of GURT (Georgetown University Round Table) 2002… is the question of how we should understand words such as multimodality or more simply, modality. 'Modality' in the grammatical sense may be realized within any of the many 'modes' that may be used to communicate. Thus, 'modality' is polysemous in that it might make reference either to the grammatical system of existential stances of simply to the presence of use of modes of communication' " (Levine and Scollon, 2004: 2).

To solve this terminological issue, I propose that Mode refers to the role language is playing in an interaction in relation to Tenor and Register in register theory, retaining its original essence (Halliday and Hasan, 1985). My argument is that SF researchers do refer back to Hasan's register theory and refer to the term, 'mode' as what it originally means to be in SFL. To refer to 'mode' as a semiotic resource complicates the issue because as seen in Figure 3.1,

mode only exists in the context of situation while a semiotic resource consists of the expression, grammatical and discourse-semantics planes. In SF theory, following O'Halloran (2005: 20), mode can also refer to 'the channel through which semiotic activity takes place'. It expands the concept of a strictly monomodal linguistics-based theoretical form into a form which address the multimodal environment. Hence, modes include our sensory channels such as vision (that is, to see), auditory (to hear), somatosensory (to touch), gustatory (to taste) and olfactory (to smell).
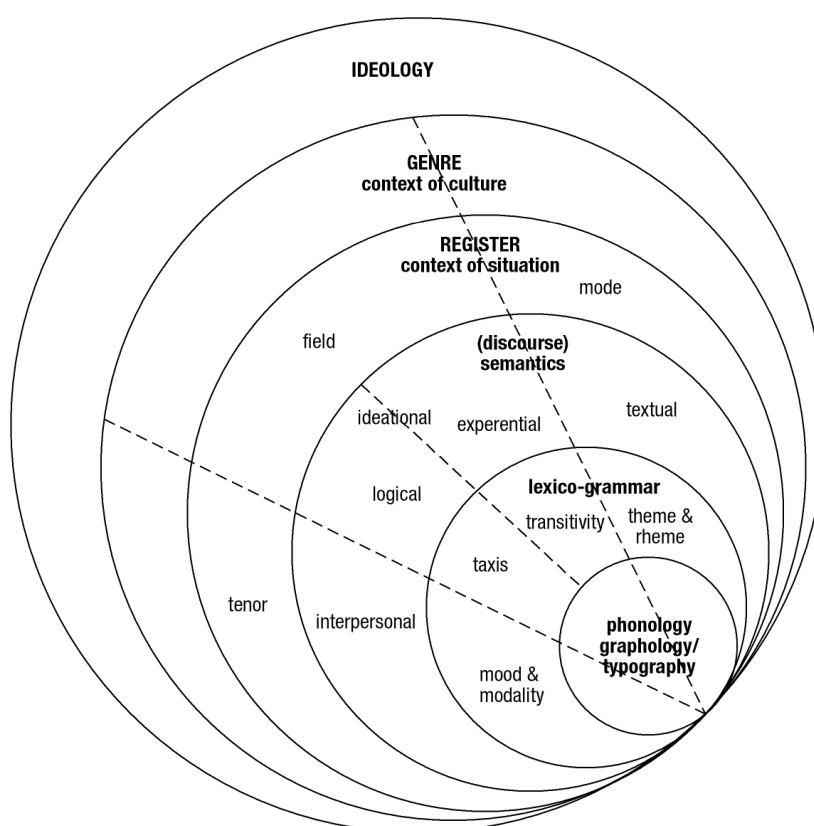
Figure 3.1: Stratification of Language
(adapted from Martin, 1992 and Lemke, 1998)

However, I recommend, from an SF perspective, 'multimodality' refers to the employment of more than one semiotic resource. This is in contrast with O'Halloran's (2005: 20) recommendation that 'multimodality' should refer instead to 'discourses which involve more than one mode of semiosis' in which 'mode' is referred as the channel of semiosis. I recognise that there may be the tendency of using the term, 'mode' as a semiotic resource

with this recommendation. However, in view of the proliferated use of terms such as 'multimodality' and 'multimodal' to mean the employment of more than one semiotic resource in SF research, it is an insurmountable task to change the general perception of the SF community. And beyond SF community, 'multimodality' in fact, contains the meaning of the usage of more than one semiotic resource. Hence, I propose the retention of the term, 'multimodality' to mean the employment of more than one semiotic resource. And to address the multiple channels of semiosis, I propose the term, 'multimode', which can function both as a noun and an adjective, for example, 'a multimode text'.

'Modality' should retain its original meaning, that is, to refer to the interdeterminate degrees, between the positive and negative poles (Halliday and Matthiessen, 2006) or the visual derivative, 'the truth value or credibility of… statements about the world' Kress and van Leeuwen (2006: 155). Both meanings are similar and direct the SF researcher towards the same cause of understanding degrees of meaning in terms of truth and credibility. Hence, the term exists only as a collective noun and not as a noun *per se*, to mean a 'semiotic resource'.

3.1.2. DEFINING SEMIOTICS

In the formulation of the abovementioned terms, I have referred to the term, 'semiotic resource' which is deliberated and clarified in this section. I will address what constitutes a 'semiotic resource' in section 3.3.

Since Saussure and Pierce, the word, 'semiotics' has been widely used in a variety of contexts. Today, it is a meaning-laden word with derivatives such as 'zoosemiotics', 'anthrosemiotics', 'biosemiotics' and so forth. Cobley (2001: 260) attempts to define this meaning-laden word as 'the specificity of human semiosis' and 'the general science of signs'. Our concern is related to 'the specificity of human semiosis' in which he further postulates the concept of 'metasemiosis', that is, 'the possibility of reflecting of signs'. O'Halloran (2005: 6) concurs with this view: 'we impose order on the world, and that order is expressed semiotically through choices from a variety of sign systems'. These sign systems are also

referred to as 'semiotic resources' (ibid.). O'Halloran (2005: 11) further defines what a semiotic resource is: 'a functional sign system which is organized grammatically'.

Hence, multisemiotic discourse is considered as discourse which employs more than one semiotic resource, in which meaning is realised through the interaction of semiotic resources (O'Halloran, 1999, 2004, 2005, forthcoming). In effect, 'multimodality' equates to 'multisemiotics' or 'multisemiocity' that is the employment of more than one semiotic resource. A multimodal text is a multisemiotic text and vice versa. However, a mode is NOT a semiotic resource.

Related to the SF term, 'semiotics' is the word, 'semiosis' which refers to 'the action of signs' (Cobley, 2001: 259) or simply put, the process of meaning-creation. This has led O'Halloran to postulate the terms, 'intrasemiosis' which refers to 'meaning arising across semiotic choices' and 'intrasemiosis', that is, 'meaning within the systems which constitute the grammar of each resource' (O'Halloran, 2005: 158-9).

Apart from the confusion over these essential SF terms, I also want to concretise a few SF concepts and terms. I will also suggest a more precise nomenclature. Besides having an obvious taxonomical value, a precise nomenclature reduces our efforts in trying to understand each other's frameworks and prevents misunderstanding over words with different meanings.

3.1.3.   DEFINING MEDIUM

Related to the concept of 'mode' and 'semiotic resource' is the notion of 'medium'. Jewitt (in Levine and Scollon, 2004: 184) refers to media (plural equivalent of medium) as 'technologies of dissemination'. This concurs with other SF researchers' views, including O'Halloran (2005: 20) who defines medium as 'material resources of the channel'. I will use O'Halloran's (2005) and Kress and van Leeuwen's (2001) example of a radio program to concretise the point: a radio program which employs the semiotic resources of speech and music is single-mode, multisemiotic (or multimodal) and takes shape the medium of the radio.

3.1.4.   DEFINING SYSTEM

As postulated earlier, a system is a paradigmatic configuration of options. Expanding the notion of system, Halliday (1984: xxvi) conceives the 'system network': 'a theory about language as a resource for meaning-making. Each system in the network represents a choice: not a conscious decision made in real time but a set of possible alternatives…'. This is usually represented in SFG as tree diagrams with curly brackets to depict the co-occurrence of options (that is, AND) and square brackets to depict the plausible occurrence (OR). Hence, a system is conceived as an abstract idea about a configuration of options while a system network is realised by a tree diagram. This also presupposes that there are options and functions of choices within a system and system network.

3.1.5.   DEFINING INTERSEMIOSIS

Since the concept of 'intersemiosis', that is the meaning (re)creation processes between more than one semiotic resource, is of paramount importance, I recommend Lim's (2002, 2004) abstract conceptualisation of this critical space in between semiotic resources known as the Space of Integration (refer to Figure 2.1). Within the SoI, intersemiosis takes place. At this juncture, O'Halloran's (2005) neutral term, 'mechanism', referring to processes which occur during intersemiosis is appropriate. As a result, mechanisms like 'homospatiality' (Lim, 2002, 2004); 'semiotic metaphor', 'semiotic mixing', 'semiotic cohesion' and so on (O'Halloran, 2005, forthcoming); the 'resource integration' and 'meaning compression principles' (Baldry and Thibault, 2006), 'resemiotization' (Iedema, 2001, 2003), 'intersemiotic complementarity' (Royce, 1998, 1999, 2002) and 'bi-directional investment of meaning' (Cheong 1999, 2004) exist in this abstract SoI of meaning multiplication and expansion.

3.1.6. SUMMARY OF TERMS

The discussion on the (re)definitions of the abovementioned terms is summarised in Table 3.1 as displayed below.

TERM	MEANING
Mode	Channel of semiosis in SFT or the role of language as conceptualised for Register and Tenor in SFG
Semiotic Resource	Sign system for the creation of meaning
Medium	Material resource for semiotic resource
Modality	A collective term to mean degrees of truth or credibility
Multimodality or Multisemiocity	The employment of more than one semiotic resource
Multimode	The employment of more than one mode
Multimodal discourse	Discourse which employs more than one semiotic resource
Multimode discourse	Discourse which employs more than one mode
Semiosis	Process of meaning creation
Intersemiosis	Meaning creation through choices from different semiotic resources
Intrasemiosis	Meaning creation through choices within a particular semiotic resource
Mechanism	A process which occurs during intersemiosis
System	A network configuration of paradigmatic options
System network	A visual representation of the system

Table 3.1: Summary of Terms

It is attested while this set of definitions is concreticised, it does not suggest an impeccable venerability. It is recognised that SF development in the area of multimodal discourse is still in its infancy stage and hence, the terminology is open to modifications and suggestions. However, the word and their meanings are concreticised so that they allow us to

say what we mean clearly and succinctly. This set of definitions will be applied from henceforth (at least, in this dissertation).

3.2. THE NATURE OF VISUAL SEMIOTIC RESOURCE

In this section, I highlight the problematic nature of the visual semiotic resource from an SF perspective. The act of separating the semiotic resources of visuals and language is potentially wrought with difficulty.

Firstly, I attest that the visual aspect of language and visual images creates this symbiosis in which both are realised materially in the same medium and mode. In that quality, they are 'hardcoupled' together into the medium (Baldry and Thibault, 2006). Lim (2004: 226) concurs with this view: 'the separation of the Expression and Grammar strata for the pictorial semiotic may be perceived as an uneasy one due to the interwoven nature of the elements on both strata in meaning-making'. They are both perceived visually through the single mode of vision and realised in the same expression stratum. This hard-coupling is evident when O'Halloran (2005: 143) attests to the irony that 'mathematical visual images are multisemiotic texts'. They are conceived as mathematical images yet they possess linguistic elements such as labels and captions. O'Halloran (forthcoming) also attests to the fact that 'the theoretical separation of linguistic, visual and symbolic semiotic resources is an artificial construct'.

However, this does not deter many SF researchers to separate the visual semiotic resource from the linguistic. In fact, it is a required theoretical progression for some SF researchers (for example, Lim, 2002, 2004; O'Halloran, 2004, 2005; Royce, 1998, 1999 and Cheong, 1999, 2004). The separation of the individual semiotic resources leads to first, an understanding of how each disparate semiotic resource functions through intrasemiosis and secondly, to an understanding of how they combine together to create multiplicative meanings through intersemiosis (Lemke, 1998).

Secondly, the difficulty in separating these two semiotic resources rests in their idiosyncratic qualities which define them for what they essentially are. SF researchers recognise this fact. Baldry and Thibault (2006: 65) observes that 'the typological is the

discrete, the digital, the discontinuous. Language is especially good at construing phenomena typologically, whereas the visual image is especially effective in construing the topological, the continuous, the flowing and the merging' (see also Thibault, 1997; Lemke, 1998). O'Halloran (2005: 95) concurs with this view: 'visual images supersede language in terms of the ability to represent continuous spatial relations' and Saint-Martin (1995: 393) notes that the visual semiotic is 'continuous, sensorial and spatial', in contrast with language, which is 'abstract, discontinuous, linear (temporal) and determined by syntax'.

Although this dichotomy is recognised by many SF researchers, what is not obvious is the use of a typological entity (language) to analyse an essentially topological entity (visual imagery). This has been observed by Sidiropoulou (2006: 124) in what he terms as 'the fundamental assumption'— an assumption that rests on 'the conviction that it is possible – and therefore valid – to extrapolate a theory that has been generated for language descriptions (that is, Hallidayan SFG) into the field of multimodality and the description of a range of other semiotic resources'. It has been assumed by many SF researchers that since Hallidayan SFG has been able to analyse language in such a detailed and comprehensive way, it is possible to analyse any other semiotic resource in the same manner by simply adopting and adapting SFG to address the specific semiotic resources. This 'exotropic' view whereby SFG is able to explain an entire range of 'communicative phenomena' because of its social semiotic perspective has been suggested by Hasan (1997) and held by many other SF researchers (for example, Royce, 1998).

This has resulted in the theoretical disclaimers posited by SF researchers in the formulation of their SF frameworks. For example, Lim proposes the concept of system-metafunction fidelity to provide leeway for a system to function beyond its prescribed metafunction. This is in contrast with Halliday's concept of discrete systems fulfilling specific metafunctions at the clausal unit of analysis (for example, the system of transitivity only functions to realise ideational meanings). Furthermore, Lim's (2002, 2004) IMM model employs graduating tones to address the fluidity of the systems: 'it is unhelpful to impose a categorical tri-metafunctional distinction' (Lim 2002: 40).

Despite the clear categorical tri-metafunctional distinctions contained within her framework, O'Halloran (2005: 165) attests to the fact that 'the options within the system networks for the three resources function intrasemiotically as closed systems in theory only. In practice, the systems for language and other semiotic resources have the potential to function intersemiotically'. The inherent fluid nature of visual images poses a problem for frameworks which suggest discrete and distinct categories. Discrete formulations can be viewed as futile attempts to cover up holes in a Swiss cheese—in the end, we missed out on the essence of the cheese, its 'holiness' together with its cheesiness.

From a physiological viewpoint, Barry (1997: 117) even suggests that the visual semiotic resource takes precedence over the linguistic semiotic resource:

> 'To impose a verbal structure on visual phenomena is therefore to put the cart before the horse. Perception comes first in evolution and in the person—well before the fact of spoken language and the development of written language. Although spoken and written language both have a profound influence on perception, the organization of precepts nevertheless precedes them. It is already ordered to a certain degree by a system, however inefficient, which evolution itself has imposed'.

As a suggestion, in order to address this issue, instead of creating precise SF frameworks, we can adopt a more general framework which allows for more flexibility especially for more dynamic semiotic resources. Sidiropoulou (2006: 125) comments that: 'This is probably part of the rationale explaining why, in their social semiotic theory, Kress and his colleagues… take on the Hallidayan framework in a much more loose and abstract manner in comparison to the authors' highly disciplined, systematic and schematic application of the theory'. This general and abstract manner of analysis is adopted by Baldry and Thibault (2006). They do not prescribe strict frameworks with discrete systems to analyse a wide range of texts but instead employ a variety of tools within their multi-purpose toolkit.

At this juncture, we can place the various SF frameworks on a linear progression in terms of its delicacy, from a general to a precise framework, as displayed in Figure 3.2.

GENERAL   PRECISE

Iedema (2001, 2003), Baldry and Thibault (2006), Lim (2002, 2004), Cheong (1999, 2004), Royce (1998, 1999, 2002), O'Halloran (2005)

Figure 3.2: Delicacy of SF Frameworks

On one end of the linear progression, Iedema (2001, 2003) framework is entirely based on the notion of resemiotization; he does not offer any tools but uses this general principle to foreground the process and materiality of semiosis while O'Halloran (2005) offers a comprehensive framework with systems working at every rank and metafunction. The problem is that while general principles are helpful, the vagueness of the approach rely on the reader's familiarity with concepts such as metafunctions, contexts and genres. It lacks anchoring points for the uninitiated. A comprehensive framework can offer a more complete view and it is always argued on the concept of the 'Scale of Delicacy' (O'Toole, 1994) in which the reader can choose to analyse in varying degrees of detail as the occasion demands. However, it also entails an acquisition of a large amount of knowledge and understanding on the part of the reader in order to use the framework. Moreover, as suggested by O'Halloran (2005), no framework can claim to be exhaustive. In her latest work, O'Halloran (in press) suggests that 'the discourse and grammatical systems for visual imagery require descriptive categories and analytical approaches which do not necessarily involve SFL categorical-type system networks'.

Hence, the most viable option at this point is to adopt a balanced approach—to form a general SF framework (not just a notion) which allows room for flexibility and maneuverability and with non-discrete systems. In essence, this echoes the philosophy set out in Baldry and Thibault (2006: xvii-xviii):

> 'an integrated approach to textual analysis and transcription, rather than one which pulls out and isolates single features and focuses on them. The emphasis is on the thick textual dimension of the meaning-making process. In such an approach, complexity quickly comes to the fore in ways which mitigate against atomistic and piecemeal solutions based on simplicity. Once again, the toolkit is our informing metaphor'.

Similarly, this dissertation will formulate a toolkit for the analysis of the visual and linguistic semiotic resources of the printed medium.

3.3. MULTISEMIOTIC FOR MULTISEMIOTIC

As an accessory to the toolkit, the adoption of visual strategies can elucidate the fluidity of the visual semiotic code as well as intersemiosis. One established visual strategy has been the adoption of matrixes which essentially are tabular configurations of paradigmatic and syntagamtic options, which can be attributed to O'Toole (1994). Besides the employment of matrixes, SF researchers can employ tools afforded by our current technologies; tools which in themselves are multisemiotic tools. In essence, multisemiotic tools for multisemiotic discourse. In printed discourse, the most obvious tools will be the use of graphics software to elucidate the analysis and foreground certain elements.

The next step is to develop tools (afforded by current technologies) to analyse multisemiotic texts. This has been suggested by O'Halloran (in press): 'the ultimate aim is to develop (computer) software which provides the means for continuous integrative layered analysis of multimodal discourse'; she employs the use of the image editing software, Adobe Photoshop, to highlight metafunctional meanings in advertisements and Adobe Premiere to analyse film. O'Toole (1999) in *Engaging with Art* provides the exploration of system selections in paintings using hypertext while Baldry and Beltrami (2005) develop the *MCA (Multimodal Corpus Authoring System)*, a web-based multimodal concordancer, to provide transcription analytical tools for film texts.

3.4. THE (RE)DEFINITION OF SEMIOTIC RESOURCE

It is easy to see why language is a semiotic resource. With it, we can do most things. We can show our love, our hate, fears and dreams. We can be clear or obtuse in our meanings. We can make things complicated or easy. We can covey a single thought or a million thoughts. We can talk about many things. We can talk about everything under the sun and mean nothing. We can make things happen. We can move people to tears or joy. Language

possesses an inherent structure and potential like no other semiotic resource system. To compare another semiotic resource to language is almost an impossibility. But yet, we have the tendency to compare other semiotic resources with it, to use the similar structure, to envision how other semiotic resources can become like language. We are disappointed when other semiotic resources cannot live up to the high standards of language. And we wondered what went wrong.

In the attempt to analyse and contain, qualify and quantify (the English) language, a mammoth structure has been erected. It is represented visually in Figure 3.1. Our SFG tradition informs us that there are four metafunctions, four strands of meaning in language; three planes of context, content and expression; strata levels of phonology or graphology, lexicogrammar, discourse-semantics; and context planes of register, genre and ideology. Systems are designed to analyse the stratified levels in order to understand how different types of meaning are created. When we nearly thought the job is done, another entire creature steps into the picture. We believe that our mammoth structure with its precise systems developed over the years is also applicable for this new semiotic resource: "there is no reason, in principle, why this kind of thinking cannot be extended to the complex systems of topological differences that characterize the 'grammar' of visual semiosis" (Baldry and Thibault, 2006: 18). But this time it is different. The visual semiotic resource and its semiosis cannot be constrained properly. It does not respond to systems and structures. In fact, it often tries to break free from the chains and cages we have shackled it with.

It is time to adopt another strategy altogether, one which shakes off our previous perception on what constitutes a semiotic resource. We need to rethink how we can define a semiotic resource while still believing that SFT can offer a better alternative than other theories. It will be a tough balance. But we have to begin somewhere.

3.4.1.   (RE)DEFINING GRAMMAR

The call for the (re)definition of grammar (in the traditional sense) has been a strident one, especially from an SF perspective. Kress and van Leeuwen (2001: 60) proposes that

grammar connotes a traditional form of thinking which suggests 'rigidities, certainties and conventions'. Kress and van Leeuwen (2001: 60) think this is not a 'tenable' approach given the multimodal quality of current texts and posits that we should view grammar as shifting and obtain clues and rules rather from 'the socially contingent transformative action of those who avail themselves of the resource'. Similarly, Baldry and Thibault (2006: 68) (re)define grammar as 'a socially-shared system of resources' and attest that

> "this does not mean the makers and the interpreters of visual texts need to follow rigidly prescriptive rules of what is 'right' or 'wrong' as far as visual composition is concerned. The word 'grammar' is not being used here in this traditional, prescriptive sense. Instead, visual images, just like linguistic texts, make use of a system of possible forms and their possible combinations to create visual texts which may be interpreted according to particular cultural conventions and practices".

There is indeed a pressing need to relook at what is the meaning of grammar and how to formulate a 'new' theory of grammar which does not ignore our Hallidayan SFG heritage while addressing the issues related to visual semiosis and multimodality.

In Hallidayan SFG, we conceive grammar as 'lexico-grammar' having both vocabulary and wordings. Halliday and Matthiessen (2006) further envisions lexico-grammar as sitting in between a cline of two opposite poles of lexis and grammar (as reproduced in Figure 3.3).
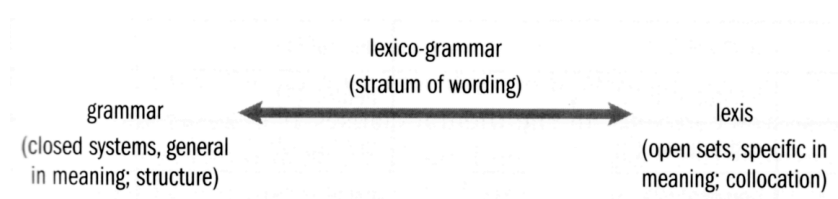
Figure 3.3: Lexico-grammar Cline
(reproduced from Halliday and Matthiessen, 2006: 43)

In this effect, lexicogrammar has both syntagmatic ('the company they keep') and paradigmatic ('the options that are open to them') relations. This essentially is an 'abstract model of the system of language, based on observation of language instantiated in use' (Halliday and Matthiessen, 2004: 50). In reference to Figure 3.3, the visual semiotic resource

would be situated closer to the lexical pole than the grammatical pole. While it has an adequate vocabulary to represent objects, things, feelings etc., they lack a proper grammar in the sense they are not very selective about their company, in fact, they welcome any company. It is not a case where visual images do not have any 'grammar' but the 'grammar' does not appear to be as defined as language.

Halliday (1985: 2) may attest that 'grammar goes beyond formal rules of correctness'. In the similar vein, Eggins (2004: 139) suggests that SFG tends towards a 'descriptive' rather than a 'prescriptive' grammar. Despite these assertions, we are unable to escape from the fact that there is the existence of **ungrammatical** constructions in the English language. They are incorrect because they do not represent our patterns of experience 'properly'; we are unable to say what we mean. For example, a grammatical construction like 'very Jimmy Jane much loves*' is not entirely meaningful and does not say what we want to mean correctly: 'Jane loves Jimmy very much'.

As a counterpoint, visually, to represent that 'Jane loves Jimmy very much', we can employ the image of a girl hugging a boy tightly. However, if we employ the image of a red triangle overlapping a blue square, we cannot convey that message very well. There lies the subtle difference. As speakers of English, we know that the linguistic construction is grammatically incorrect, and in a sense, 'incorrect'. We know it is about people loving each other but we do not know who is the actor and who is the recipient of the love. In the visual image, despite the fact it does not convey love, it is not a 'incorrect' construction. It is still acceptable and can mean something to somebody, especially in the context of abstract art. This image of course can easily be situated with one of Malevich's suprematist paintings in the use of abstract shapes of primary colours to convey meaning.

In that sense, Kress and van Leeuwen's grammar of visual design (2006: 2) tends towards 'lexicality' rather than 'grammaticality'. In their definition of visual grammar, Kress and van Leeuwen (ibid.) attest that 'visual structures point to particular interpretations of experience and forms of social interaction'. For example, in their conceptualisation of 'Given-New' relations, Kress and van Leeuwen (2006: 184) 'expect to find, therefore, systematic

differences in the dispositions of material in layout across different magazines – for instance, according to their readership'. For example, in *Beach Culture* magazine, David Carson purposefully goes against layout convention and ran body text (second column of text) down the spine of the double spread of the magazine (see Figure 3.4).

Figure 3.4: David Carson's Rule Breaking Layout
(Reproduced from Blackwell, 2000: unnumbered)

It is 'incorrect' only in the sense in goes against 'normal' conventions of page layout sensibility. However, it is not an 'incorrect' construction. We accept it visually. In fact, it represents what Carson wants to convey through page layout, that is, 'the rule-breaking of (David) Lynch's work' (Blackwell 2000: unnumbered). In conclusion, it is attested that it does not mean that there is no 'grammar' in visual grammar, but an 'invisible' grammar, elusive because of the limitations of our linguistic and logocentric frameworks.

Hence, in replacement with the notion of 'correctness', the concept of 'appropriacy' is suitable for the visual semiotic resource. Eggins (2006: 139) posits that

> "degree of appropriacy is assessed not in terms of arbitrary blanket statements about inflexible 'grammatical' rules, but as statements about grammar as a set of choices for use in context. Some choices are appropriate in certain contexts, but inappropriate in others".

In consequence, it is appropriate for the visual image of a girl hugging a boy in the context of a birthday card. But, if the visual image hangs as a art piece in a retrospective art exhibition on Suprematistism, it will be very inappropriate. Similarly, Carson's layout is appropriate in the context of *Beach Culture* magazine, 'the most progressive message in a bottle since the second British invasion' (Blackwell 2000: unnumbered), it would be inappropriate in *Martha Stewart Living* magazine.

This is also applicable for systems. In a westernised culture, it is inappropriate to wear black to a wedding but in northern parts of Portugal, brides wear black gowns on their wedding day (Kress and van Leeuwen 2002). The concept of appropriacy suggests there is no right or wrong grammatical constructions, only inappropriate or appropriate constructions. It also presupposes the plausibility of the occurrence of inappropriate constructions to convey certain meanings which appropriate constructions, otherwise, cannot convey. In the visual semiotic resource, there are no rules to follow but only guidelines.

Hence, a semiotic resource may not possess grammatically correct constructions in the traditional sense but rather abide to guidelines based on the principle of appropriacy. There is no 'wrongness' or 'rightness', only 'appropriacy' and 'inappropriacy'. However, an inappropriate construction does not mean that the representational, ideational or compositional meanings cannot be communicated. It only shows that the text is going against conventions held by that specific community of readers whose rejoinder is not 'what do you mean' but 'what can it mean'.

3.4.2.   (RE)DEFINING THE CONTENT PLANE

The unique aspect about language is the decoupling of the 'semogenic process' of meaning-creation (Halliday and Matthiessen, 2004). The interface which creates meaning, that is, the stratum of semantics is 'decoupled' from the wording, that is the stratum of lexicogrammar. This difference is illustrated clearly in Eggins (2004: 17) represented here in Figure 3.5.

	Traffic Lights	Language
CONTENT	meaning	meaning
		words ↘
EXPRESSION	lighting ↘	sounds ↘

Figure 3.5: Content and Expression in Traffic Lights and Language
(Reproduced from Eggins, 2006: 17)

The semiotic resource of language has three strata, meanings are realised in words, and words in sounds. In contrast, the semiotic resource of traffic lights has only two strata, meanings are realised in lighting. Traffic lights is considered a 'simple' semiotic system by Eggins (2004: 19) because it lacks a lexicogrammar, 'the level responsible for turning 'meanings' into 'wordings', a combination of words (lexis) and structure (syntax).

Martin (1992: 20) considers that the stratification between discourse semantics and lexico-grammar is solidary (that is, natural) while that between lexico-grammar and phonology/graphology is arbitrary. Both the strata of discourse semantics and lexicogrammar are involved in the creation of meaning, visually captured by the conflation of the two strata as the stratified content plane (see Figure 3.6).
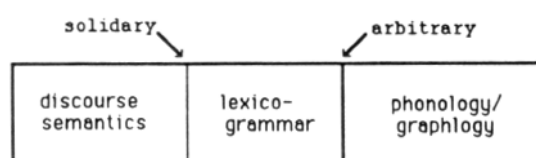
Figure 3.6: Stratification of the content plane
(Reproduced from Martin, 1992: 20)

Language, because of its typological structure, allows for this clear demarcation into the unit structures of the clause and text. However, my contention that this solidary division is stronger within other semiotic resources, such as the visual semiotic resource. The two strata have not yet decoupled to avail themselves for separate conceptualisations and even less so for separate analysis. Case in point, Royce (1999) in his framework (see Table 2.6), at the

visual semantics level in the analysis of visual meanings, borrows grammatical systems from Kress and van Leeuwen (1996, 2006): identification, activity and so on for ideational meanings, address, power relations etc. for interpersonal meanings and information value and visual salience for textual-compositional meanings. Systems at the **grammatical** level are transferred into the **semantic-discourse** stratal level. The strong conflation of the strata of visual semantics and visual grammar disallows a clear division of the two strata, resulting in interchangeable systems for the analysis of semiosis. Another plausible explanation of this conflation is that visual grammar tends towards 'lexicality' (as explained earlier), thus providing a more semantic quality than a grammatical quality and as a result, extending into the visual semantics strata.

This has direct significance on our definition of what constitutes a semiotic resource. From our definition of 'semiotic resource' based on language, there is the natural assumption of the possibility of separating the semantics stratum from the grammatical stratum. I propose a reassessment of this definition and that since these two strata are extricably linked and rest on similar content plane, the ability to delineate these two strata clearly should not be considered in our definition of a semiotic resource.

3.4.3.   (RE)DEFINING A SEMIOTIC RESOURCE

Kress and van Leeuwen (2001: 344), in their defence for colour as a semiotic resource, have questioned on what constitutes a grammar: 'part of the problem may lie, not with colour or colour terms, but with our notions of meaning, or, in this case, grammar'. They propose not to adopt notions of 'correctness' or 'regularities' of grammar in the traditional sense to define a grammar. Instead, their basis for a semiotic resource is based on simply how developed the sign-system for semiosis or meaning-creation: 'what makes a mode* mode-like* is its availability as a resource for making signs in a social-cultural group' (Kress and van Leeuwen, 2002: 346; asterixes are mine and indicate a difference in terminology compared to that used within the context of this dissertation). In doing so, they excluded the notion of articulation—whether the system is used widely in that particular group for

'communicative and representational purposes' (ibid.). They have abandoned a criteria-based system of determining what constitutes a grammar and relied on the basic principle of affordance, whether the sign-system has developed to a degree suitable and available for semiosis.

This, in effect, has lead to a shift in focus from the text as instantiation (articulation) to the system (affordance). However, our basic understanding is that the instantiations create a possible map for us to define the system. Although the system may be on a time-scale which supercedes all instantiations, it requires a myriad of texts as instantiations 'to put together a picture of the system on the basis of our samplings of very many instances used by many different people in different contexts' of a particular cultural group (Baldry and Thibault, 2006: 172). Hence, it is a logical impossibility. Only with the proliferation of instantiations or articulations can one devise a system (or confer the value of grammar) for that particular semiotic resource. The many occurrences of the colour, 'blue', in many contexts of our social-culture, such as sky and sea leads us to associate blue with expanses of space, hence freedom and peace. Also, 'blue' has come to mean the male sex through another set of instantiations proliferated throughout our culture in terms of baby clothes, toilet signs, fashion accessories etc. It has become an ontological issue of which comes first. My basic argument is that the many instantiations lead us to system and not the other way round since the system is essentially an abstract conceptualisation. Articulation of texts lead us to the affordance of the system. Both articulation and affordance are crucial to the definition of a semiotic resource.

Hence, I propose a three-point based criteria for determining a semiotic resource. A semiotic resource can be defined by its potential, proliferation and prominence. Potential is related to its affordances available in the system. Potential concurs with Kress and van Leeuwen's (2002) idea of a developed grammar readily available for meaning creation. A semiotic resource should possess potential for semiosis. Secondly, proliferation is related to articulation and suggests the myriad of instantiations of texts using that particular semiotic resource. There is a proliferated use of the semiotic resource in a wide range and number of texts in that particular community. Thirdly, besides potential and proliferation, a semiotic

resource should possess prominence. For example, there is a proliferation of copyright symbols on websites, for example, '©' in '©2006 Google' found on http://www.google.com. Copyright symbols have potential for meaning creation when expanded. Creative Commons (http//creativecommons.org), a non-profit organisation, has developed a sign system for copyrights from 'all rights reserved' represented by ©, 'some rights reserved' represented by ⓒ and 'no rights reserved' represented by ⓓ). However, while it has potential and proliferation, it is not sufficiently prominent to be considered as a full-fledged semiotic resource.

In summary, a semiotic resource

- Abides to guidelines-based appropriacy and not rules-based correctness.
- May not have a clear delineation between the grammar and semantics stratum and,
- Should have qualities of potential, proliferation and prominence in a specific community.

In a way, this addresses the issue raised earlier with O'Halloran's (2005) SF framework for mathematical visuals. O'Halloran (2005) considers mathematical visuals as a semiotic resource despite the fact that there are linguistic items such as titles and captions together with mathematical visual images. Mathematical visual images have qualities of potential: they are 'capable of representing graduations of different phenomena' (O'Halloran, 2005: 132), proliferation: they are used in many mathematical textbooks and prominence: they are featured prominently in mathematical textbooks. Hence, we will accord the term, 'semiotic resource' to mathematical visual images within the community of mathematics. However, we will deliberate on whether to extend the same treatment to 'Other Items' as they are not proliferated or prominent in many texts.

3.5. THE (RE)DEFINITION OF SYSTEM

At this juncture, it is appropriate to theorise on the concept of system. As mentioned earlier, a system is a network configuration of paradigmatic options, and often displayed visually as a system network employing a tree diagram. In the analysis of the semiotic resource of language using SFG, systems and systems networks are employed to account for intrasemiosis within the semiotic resource. One important point to note is that these systems and systems networks are working discretely on a single metafunction and at a single stratum, for example, the systems of MOOD and MODALITY are employed strictly in the interpersonal metafunction at the lexicogrammatical stratum.

This notion of 'discreteness', that is, 'each structural unit has clearly defined boundaries' (Halliday and Matthiessen, 2004: 61), does not apply for some systems within other semiotic resources. O'Halloran (2005, forthcoming) posits the view of intersemiotic functioning of the various systems despite the discrete placement of systems within her SF framework. To address this issue of inter-operability of the systems, Lim (2002, 2004) proposes the concept of system-metafunction fidelity, to recognise that while systems function quad-metafunctionally and simultaneously, they may at times dedicate themselves to a particular metafunction. Hence, the final picture of a system in a multisemiotic text is not one which is functioning at a single cell in a matrix but one which has 'ghost-like' ability to move beyond one cell to another, metafunctioning where it is required. However, it is recognised that some systems (like that which belong to language) still function discretely.

In order to differentiate the two types of systems, I propose the terms: 'intra-system' to refer to systems which can operate quad-metafunctionally within the semiotic resource and 'inter-system' to refer to systems which can operate quad-metafunctionally and across the semiotic resources. Inter-systems can be considered a 'super-system' which has the ability to create meaning in various semiotic resources. An example of an 'intra-system' is Salience, defined as 'the degree to which an element draws attention to itself' (Kress and van Leeuwen, 2006: 200). Although, it is placed under the compositional metafunction, it can create meanings which are not compositional, for example, the Saliency of a picture of an angry face

besides predominating compositionally, reacts interpersonally due to its Salient position in the middle and huge size. An example of an inter-system is Form, the formation of a shape and representational structure using basic systems like line, shape, dot etc. It functions in the visual semiotic resource as the formative system for various shapes while functions as the formative system for typographic shapes in the linguistic semiotic resource. It is more helpful to consider systems as inter- and intra-systems as we have come to realise that inter- and intra-semiosis are complex and often not precise, especially in a multisemiotic text and systems work simultaneously and cross-metafunctionally.

4. CHAPTER 4: PROPOSING THE SF FRAMEWORK

4.1. IMM AS TOOLKIT

In summarising the frameworks, the meta-models and various meta-theories and addressing the issues which have arose as a result, I have also provided clear signposts with regard to my position in terms of SFT. Firstly, I have attempted to concretise SF terminology to present a more definite framework to describe SF phenomena. Secondly, I have problematised the visual semiotic resource and offer some solutions based on observations on the various SF frameworks. Thirdly, I have reinvestigate the definitions of semiotic resource, grammar and system in order to provide a clearer terminology. I have also introduced new terms to address new concepts. This, of course, leads me to my proposal of an SF framework which addresses the issues and problems and can present itself as a balanced approach, an eclectic toolkit synthesizing the merits of the various SF frameworks.

I have chosen to use Lim's (2002, 2004) Integrative Multisemiotic Model (IMM) as displayed in Figure 2.1 as the general toolkit concurring with his view that the 'IMM may be likened to a neat and well-equipped toolbox' (Lim, 2002: 149). However, as mentioned earlier in section 2.2.1, in the review of Lim's (2002, 2004) IMM model, the realisation at the expression plane should not be Typography but Writing. Instead, Typography functions as an intra-system within the linguistic semiotic resource. The amended IMM model (hereafter, known as IMM2) (Lim, 2002, 2004) is shown in Figure 4.1.
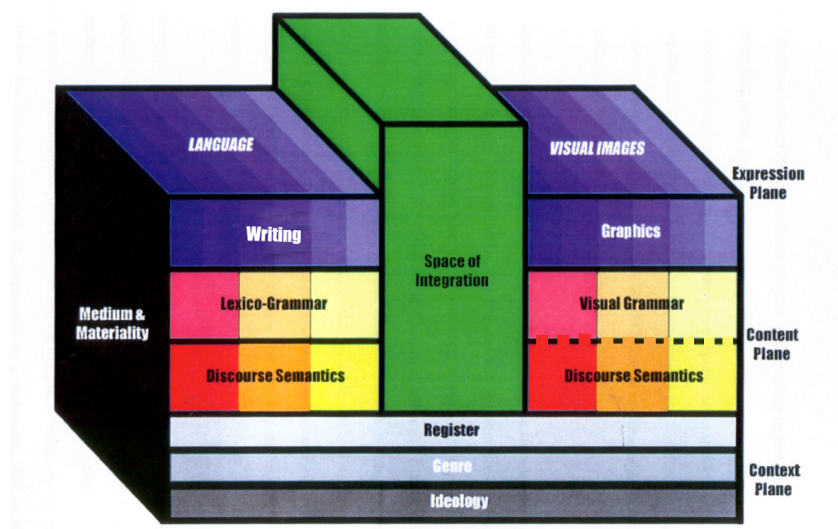

Figure 4.1: Integrative Multisemiotic Model version 2 (IMM2)

Similar to Lim (2002, 2004), IMM2 consists of three major planes: Expression, Content and Context planes. Within the Context planes are the strata levels of Ideology, Genre and Register. For the visual semiotic resource, the Content plane is stratified into Visual Semantics and Visual Grammar and with the Expression plane containing Visuals. For the linguistic semiotic resource, following Halliday (1984, 2004), Martin (1992), Martin and Rose (2003), the Content plane is divided into the strata levels of discourse-semantics and lexicogrammar with the Expression plane containing Writing. For the visual semiotic resource, the grammar and semantics strata are divided by a dotted line to underline the fact of the conflation of both the strata levels (as postulated earlier in Section 3.4.2).

For the linguistic semiotic resource, I will deploy Hallidayan SFG to analyse Lexicogrammar (Halliday, 1994; Halliday and Matthiessen 2006) and for the analysis of Discourse-semantics, Martin (1992), and Martin and Rose (2003) will be deployed (see Table 2.2). For the visual semiotic resource, I will deploy Kress and van Leeuwen's (1996, 2006) grammar for visual images at the strata level of Visual Grammar and at the strata level of visual semantics and Dondis' *Primer for Visual Literacy* (1973) at the expression level for Visuals as summarised in Royce (1998: 120) and conceptualised into Table 4.1. I will refrain from a discussion of the various systems here due to the constraints of space and they have been comprehensively discussed and theorised elsewhere.

Display element	Summary
Dot	Minimal visual unit, pointer or marker of space
Line	Fluid "restless articulator of form" in sketches, or a rigid line which is used to tightly control visual space (as in a technical drawing)
Shape	Includes the basic geometrical shapes of the circle, square, triangle and their various combinations and dimensions
Direction	Thrust of movement, similar to Vectors, which arise from the nature of the various circular, diagonal and perpendicular shapes
Tone	Presence or absence of light
Colour	(See intra-system of colour in Section 4.2)
Texture	(See intra-system of tactility in Section 4.3)

Scale or Proportion	Related to Salience, relative size and measurements
Dimension and Motion	Use of perspective to give a sense of depth, and the use of depth of field in still and moving film

Table 4.1: System of Visuals at the Expression Stratum
(adapted from Royce, 1998: 120 and Dondis, 1973)

Instead, in the following sections, I address the shortcomings of IMM and expand on the existing SF research conducted by Lim (2002, 2004) and the SF researchers as mentioned in Chapter 2. I propose systems which Lim has not proposed while improving on existing systems through clarification and elaboration. In the end, I hope I have contributed to the existing SF research by addressing issues which have surfaced as well as improve on certain theoretical underpinnings of SF research.

It must be attested that IMM2 serves as a metaphorical toolkit, and within it, are a whole range of tools: inter-systems, intra-systems and mechanisms. Flexibility in the analysis is the key to a balanced approach given the fluid nature of intersemiosis: 'we are contained within particular semantic domains according to the limitations of the systems which are available. These systems, however, constantly evolve so that meaning making is a dynamic practice in which change is possible' (O'Halloran, 2005: 10).

4.2. COLOUR AS INTER-SYSTEM

Although colour is cited as a key component in meaning creation in a number of SF frameworks (Kress and van Leeuwen, 1996, 2006; O'Halloran, 2005; Lim, 2002, 2004; Cheong, 1999, 2004), its definition and categorisation is not clarified. The general sentiment tends towards its inter-metafunctional quality. Kress and van Leeuwen (2002: 347) concurs: it is 'difficult to plausibly assign colour to just one and only one of Halliday's three metafunctions'. Ideationally, they represent reality, for example, on maps, the colour 'blue' is used to represent water (Tufte, 1990). Interpersonally, they perform what Kress and van Leeuwen (ibid.: 348) term as 'colour acts', for example, the wearing of the colour 'black'

symbolises mourning and respect for the bereaved. Textually, they function as cohesive tools, especially in a magazine where certain sections are colour-coded. Colour is an inter-system with the ability to operate **quad-metafunctionally** and **simultaneously**.

Colours usually are assumed to be divided into three categories: hue, tone/value and saturation/ chroma. Hue is, in fact, the term which is commonly known as 'colour'. Hence, 'red' would be considered a hue rather than a colour. As a result, 'colour' is used as a collective noun to encompass all hues, tones and chromas. Technically, hue, as defined by Wallschlaeger and Busic-Snyder (1992: 239) is the 'specific color or light wavelength found in the spectrum' while tone or value indicates the 'brightness or dullness of a hue' and saturation or chroma, 'the attribute that determines the chromatic color difference from a gray of the same intensity or brightness'. Hue can be considered as the colour in its original, 'pure' state, and with the addition of black or white, either darker or lighter tones of that particular hue are obtained, and with the increase or decrease of the intensity of that hue, its saturation is determined.

Besides these categories, Kress and van Leeuwen (2002: 356) suggests 'purity' which refers to the scale of maximum purity to maximum hybridity and 'modulation' which refers to a scale of modulation. However, the common view is there are only three categories and the interaction between the three clines are visually represented in a colour wheel as depicted in Figure 4.2.
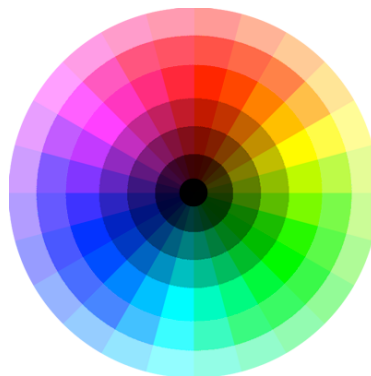

Figure 4.2: A Colour Wheel

Kress and van Leeuwen (2002: 352) suggest the possibility of the existence of 'colouremes', referred to as 'colour phonemes' which 'can combine to form many different colours, indeed, an unlimited number of colours'. This unlimitedness is, of course, false as there is a limitation of the number of colours a medium can produce. The amount of colours is visually captured by the colour gamuts of various media. It is recognised that the colour gamut of the monitor (RGB) is much larger than that of normal printing (CMYK) and physiologically, our eyes equipped us with the ability to recognise far more colours than these media can afford. Hence, the possibility of colour mixing to create new colours is not an affordance of colour *per se* but an affordance offered by the media of monitor display, printing processes and so on.

Related to the concept of colour mixing is 'colour harmony'. Complementary harmony is achieved when two hues opposite to each other within the colour circle are employed while analogous harmony is achieved when hues adjacent to one another within the colour circle are employed. Complementary colours provide direct oppositional value against each other, creating a sense of contrast and harmony simultaneously. Analogous colours, on the other hand, create a harmony which is sensible and pleasing to the senses. Disharmony can occurs when colours are chosen not according to harmonic principles. It is reiterated at this moment, disharmony should not bear any negative connotations, rather it can serve as a useful tool to create variety and rhythm. Paradoxically, achromaticism or the lack of colour is considered harmonious as evidenced by the poignant beauty of a black and white photograph. The deliberations between the countless shades of gray give rise to a landscape of powerful serenity. Its chromatic counterpart is monochromatic harmony where only one hue is utilised in varying tones and saturations.

Colour harmony is a key feature in colour schemes: 'colours in systems of colour which can be defined on the basis of specific uses of the distinctive features' (Kress and van Leeuwen, 2002: 366). An example of a colour scheme is the usage of specific colours of a corporate identity manual where only certain colours are used; and these colours are specified

exact to the medium through standard colour charts like Pantone for printing and Web-safe colours for websites.

Kress and van Leeuwen (2002) view that colour harmony relates to the grammatical quality of colour. In fact, they posit the view that colour is a grammar, a mode, a semiotic resource. They argue from the viewpoint that colour has the potential but as indicated earlier, this potential is not limitless as they claim to be but in fact, limited. In reality, the affordance of the number of colour is not determined by colour as a semiotic resource but by the media which brings them into existence on the expression plane. Kress and van Leeuwen (2001: 58) also posit the view that colour is, in fact, not a sign, but a signifier 'drawn into sign-making, and is given its signified by the maker of the sign in context of specific discourse in which and through which the sign-making happens'. This is contrast with a linguistic sign which has two parts: the signifier and the signified. They also argue that it has meaning potential because of its 'materiality and interaction with the physiology of bodies' and 'its cultural history' (ibid.: 59). Again, the meaning potential of colour is not intrinsic but extrinsically bestowed by the media it exists in.

They also observe that colour is not an independent semiotic resource. They simply brush this fact away by asserting we are in a brave new world: 'the age of multimodality' (ibid.: 351). However, this is a crucial point in determining whether colour can be considered as a semiotic resource. Since it does not exist on its own to convey meanings, it requires other semiotic resources to provide it with 'meanings'. In effect, while it is proliferated and has prominence, colour is limited in its potential for meaning-creation. It acts as an auxiliary system rather than a main system, requiring media and other semiotic resources to assist in its semiosis. Hence, I posit the view that colour is an **inter-system**. It act as an accessory for other semiotic resources such as language and visual images. It transcends both stratal and metafunctional boundaries to create meanings together with other semiotic resources.

4.3. TACTILITY AS INTER-SYSTEM

4.3.1. ARGUING FOR TACTILITY

It is understandable why the inter-system of tactility is glossed over in many SF studies of multisemiotic printed texts. It only appears to be surface instantiations and most texts (mathematical texts, science biology textbooks, children's picture books and so on) employ 'normal' paper. This is exacerbated by the fact that it is difficult to replicate the tactile qualities of the text in question within a research book or paper, which is constrained by its editorial format and budget. However, in recent years, there is an increase in the use of colour plates in research books in order to address this need of presenting the text in its most true form as possible, especially texts of a multisemiotic nature employing colour as one of its critical inter-systems.

Similarly, my contention is that while the inter-system of tactility forms a large part of the graphic designer's meaning-making devices, it is not represented and often glossed over. For example, Lim (2004) compares materiality to the interface which mediates both the content and expression planes. He cited the example of the wedding invitation card which is printed on heavier weight of paper to portray 'an elevated status' (ibid.: 222) and refrains from commenting further. Hence, I want to address this lack of theorising on the inter-system of tactility in this thesis to close the gap between the other systems.

The following is an excerpt on the production notes for a graphic design text:

> 'For a Fall 2005 portfolio for the comfy-footwear manufacturer Børn, Kátalina Group's Keith Sanders devised an unconventional slipcase to house an oversized product catalog. The shearling wrap was made in Børn's factory of the same material used for shoes; a leather strap holds the book inside, and wooden toggles secure the cover. No less attention to materials went into the book itself. Rather than a bright-white surface, Sanders opted for a warm and textured paper, creating a look that's as earthy as shoes depicted on the French-folded pages' (Mooth, 2006: 89).

The graphic design text is captured in Figure 4.3. Through the linguistic semiotic resource, we obtain a vague idea of the meaning. Subsequently, through the visual semiotic resource, the 'texture' increases, however, it must be attested that this is far from touching the

actual fur, removing the strap, flipping the pages of that particular book. The rich meanings (which are created by the inter-system of tactility) are impossible to be captured by both semiotic resources, whether linguistically or visually (as seen from this exercise).

Figure 4.3: Børn Portfolio
(Reproduced from Mooth, ed., 2006: 89)

Incidentally, this is not a stray instantiation. Case in point—if one were to flip through a trade journal dedicated to graphic designers specifically (for example, *How*, *Print*, *IdN* and so on), one would come across many paper merchants advertising their various kinds of papers differentiating their qualities in terms of weight, texture, glossiness, mattness etc. While the inter-system of tactility is often glossed over in multisemiotic research, it serves as a critical tool in the graphic designer's toolbox. Its potentiality for meaning-creation has always been underestimated by the layman but employed fully by the designer-producer to produce another set of rich meanings.

4.3.2. SYSTEM NETWORK FOR TACTILITY

The inter-system of tactility can be divided into two sub-systems: namely, 'medium' and 'materiality'. This is captured in the system network diagram as shown in Figure 4.4.
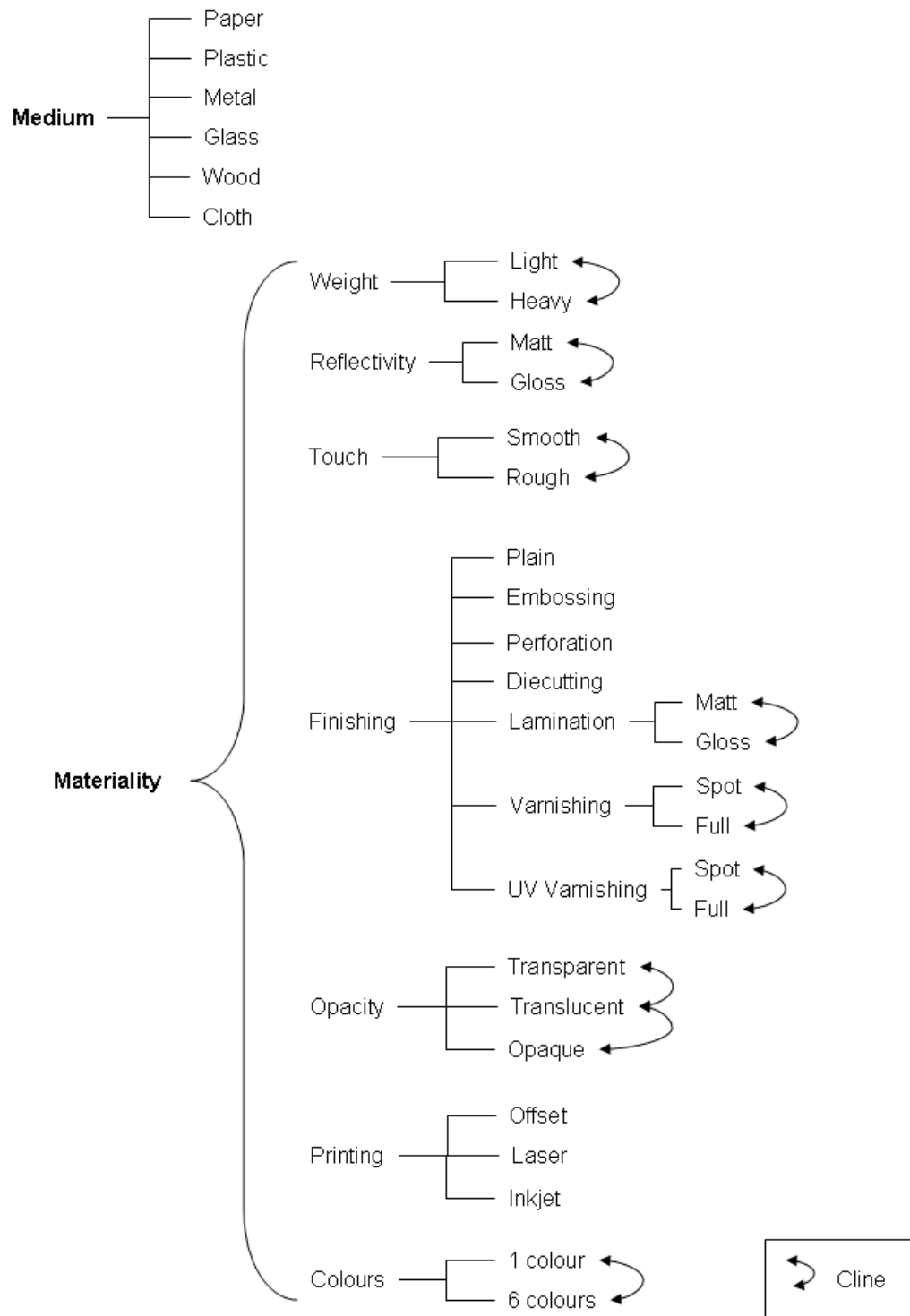
Figure 4.4: System Network of Inter-system of Tactility

'Medium' refers to the actual material which the text is printed on. Paper is the most commonly used matter to reproduce graphic design text as it is readily available and the method of production of paper has already become well-established, resulting in price and production efficiency. However, sometimes it may be printed on plastic, metal, glass, wood or even cloth. The choice of media is dependent on the meaning sought by the designer. The use of uncommon material results in a marked choice together with an increased modality which attracts the reader to the graphic design text. Figure 4.5 below shows a namecard reproduced on the matter of metal. The media acts a foundational base for the text to takes distinct shape and form while affecting the entire texture of text in a global and macro manner.

Figure 4.5: Namecard on Metal Medium

'Materiality' refers to the qualities of the medium. 'Weight' plays a part in conveying meanings. Usually, the heavier the media is, the more significant is the message. For the paper medium, this is commonly termed as grammage. The higher the grammage, the heavier the paper will be and correspondingly, the increase in cost. Hence, as a result, a heavier stock of paper equates to a more important or expensive proposal of the contents within. Brochures from a *haute-couture* boutique parading their latest season use a heavier paper compared to a department store promoting their latest sale. Grammage is measured on a continuum of weight from light to heavy (as represented by the arrows in a cline in Figure 4.4).

'Reflectivity' refers to the 'shine' of the media. It is also important to note that the location of the actual reading of the material text has a role in the creation of meaning. A graphic design text which employs the medium of metal, when placed in a dim room as

compared with a brightly-lited room, will activate different meanings due to its degrees of reflection. Gibson (cited in Baldry and Thibault, 2006: 192) terms this as the ambient optic array 'that illuminates and provides information about the surfaces, objects, events, and so on' and 'surrounds potential points of observation in the environment of the observer'. The tactile semiotic resource may afford a tendency towards the somatosensorial mode, however, it must be noted that it also employs the visual mode for semiosis. Hence, the ambient optic array plays a part in the formation of meaning, for example, poor lighting may not obtain the reflectivity required for the text to 'shine', resulting in a less-than-powerful meaning.

'Touch' engages directly the somatosensorial mode of our human facility. The desire to feel, touch and caress the media with our physical body cannot be underestimated. When the Internet Revolution took shape, many business analysts predicted the decline in the usage of paper. On the contrary, the usage of paper actually increases because many readers prefer to print out the texts on paper medium. This reveals the significance of the tactile quality of the text from the reader's perspective. The reader wants to be able to hold, touch and feel a permanency rather than a transiency. Media allows for that hardcoupling between text and meaning.

'Finishing' refers to the post-treatment after the printing process of paper-based texts. A non-treatment is considered as plain or no finishing. Embossing employs the use of a metal die on the back of paper to create a raised 3-dimensional impression on the paper. Its visual quality is not as pronounced as its tactile quality since it cannot be seen easily. However, its modal visibility can be intensified with the use of heavier weight papers, as displayed in Figure 4.6.
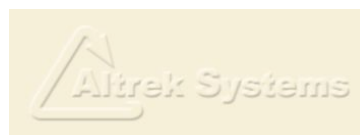
Figure 4.6: Sub-system of Embossing

'Perforation' is the process of creating a linear series of holes in a systematic manner so that the paper can be easily torn. It acts as guidelines for tearing of coupons, discount vouchers, receipts, slips etc. It usually connotes a need to respond on the reader's part to the message contained within the text.

'Diecutting' circumvents the standard straight edges of paper to provide more varied options. A metal die of the desired shape is fabricated and used to 'cookie-cut' the paper. It is often employed to create rounded corners, punched out holes and unusual paper shapes. The modal quality of the design text is highly enhanced with this post-printing process as it entails a visual as well as tactile treatment of the design text, recreating it into another text altogether through its modified compositional structure (see Figure 4.7).

Figure 4.7: Sub-system of Diecutting

'Lamination' is an after printing process which uses high pressure to bond a plastic film onto the paper, thus to a certain extent, water-proofing the paper. It also adds to the weight and thickness of the paper. There are generally two options available: matt or gloss lamination. Matt lamination provides a muted sheen to the paper and is prefered for a modern look whereas a gloss lamination increases the overall reflective quality of the graphic design text, creating an image of opulence (see Figure 4.8).

Figure 4.8: Sub-system of Lamination

Besides lamination, 'varnishing' is also a common after-printing process; it entails printing a light, thin protective coating over the printed sheet. It also provides a reflective quality to the paper, albeit less accentuated. One advantage of varnishing is the ability to perform spot varnishing, where only certain areas of the paper are coated with varnish, thus providing the necessary contrast and variation. Addressing the less-accentuated quality is another variation of varnishing termed as ultraviolet (UV) varnishing. As the name suggests, it employs ultraviolet light to bond and cure the liquid coating. The final effect is a more reflective and thicker coating. It is also available as a spot option, covering the required areas (see Figure 4.9).

Figure 4.9: Sub-system of UV Varnishing

'Opacity' refers to the how transparent the quality of the paper. This seems to be extricably linked to weight. However, the truth is certain translucent paper may be heavier than opaque papers due to their complicated production process. As a result, translucent and transparent paper is often more expensive than ordinary opaque papers. Translucent paper connotes a quality of style and prestige as it provides a sense of hidden meanings.

'Printing' is the critical process which brings the design text into being. As remarked earlier, printing has evolved from the Gutenberg press to the current offset printing. Offset printing employs the use of plate onto a rubber blanket, and finally transferring the inked image to the paper. Offset printing requires a minimum quantity in order to justify the high cost of setup equipment. Conversely, laser and inkjet printing are on-demand printing processes and do not require a minimum quantity. However, the keen observer can discern the minute differences in the application of inks onto media and thereby, confer meanings of quality into them. Due to the high setup cost, texts which go through an offset printing projects images of stability and confidence while texts using laser printing connote a

temporality. This is keenly seen in the printing of namecards where offset printing is valued over laser, and laser over inkjet (which connotes a home-based business using cheap inkjet technologies).

Finally, the number of colours play a part in providing the amount of affordances for the inter-system of colour as well as the visual semiotic resource. It is a misnomer to term a text as having 'no colour' because black and white activates the use of one colour, that is, black. While some design texts only employ one or two colours, most design texts employ four colours printing. It entails the combination of four colours in minute dots to recreate the limited spectrum of colours as afforded by the process. However, as noted earlier, the number of colours (also known as colour gamut, see Figure 4.10) available in the printing process cannot rival what our naked eye can view, hence restricting its full potentiality. The solution is hexachrome printing which entails the addition of two more colours, namely vivid orange and green to the common cyan, magenta, yellow and black (CMYK) combination to create a six-colour printing process. It claims to produce a wider colour gamut close to that of a monitor using the red-green-blue (RGB) colour model. The richness of colour can convey a sense of power and opulence.

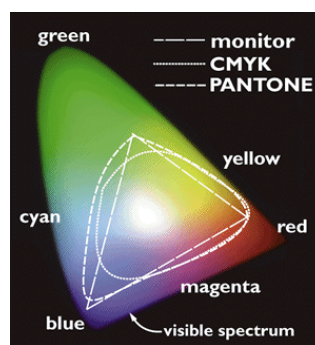*Figure 4.10: Different Types of Colour Gamuts*

As a postscript, the coverage on the inter-system of tactility is not extensive and far from near-completion. It, however, attempts to account for the prevailing systems and sub-systems afforded by our current technologies while refraining from inundating the reader with printing processes and resources which are not commonly used. It is also acknowledged that

developments in printing technology have critical consequences on the tactile affordances of the text either from the introduction of new systems or sub-systems, or the cost-reduction of current processes. In conclusion, the presentation of the inter-system of tactility herein foregrounds its otherwise invisible importance in the meaning creation process of graphic design texts of the printed medium.

4.4. TYPOGRAPHY AS INTRA-SYSTEM

Graphic designers have always used typography to create meanings. However, similar to the intra-system of tactility, it has been largely ignored by the SF community as a meaning-making system. Kress (2005: 138) concedes that *Reading Images: the Grammar of Visual Design* 'did not touch at all on typography, and it is only in the last few years that I have come to realize what a fundamental oversight this was'. Lim (2002) addresses this issue by formulating a system network for typography (see Figure 2.2). Typography functions as an intra-system within the linguistic semiotic resource with the potential to confer metafunctional meanings. I will build on Lim's (2002) system network and propose other sub-systems which have meaning-creation potential but excluded in Lim's system network.

Typography is defined as 'the craft of endowing human language with a durable visible form, and thus an independent existence' (Bringhurst, 2002:11). It is the actual inscriptions on the medium, unlike writing, which is considered an abstract realisation. Typography employs the inter-systems of colour and form to give it a representational quality, an actual reality. Bringhurst (2002) subscribes to the invisibility of typography, in which typography acts as an auxiliary tool in bringing writing into actual instantiations. This notion of invisibility is captured in the metaphor of the **crystal goblet** by Wade (in Bierut et al., 1999: 56):

> 'The other (goblet) is of crystal-clear glass, thin as a bubble, and as transparent… if you are a member of the vanishing tribe, the amateurs of fine vintages (of wine), you will choose the crystal, because everything about it is calculated to reveal rather than to hide the beautiful thing which it was meant to contain'.

At the other end of the cline sits David Carson. In one of his works, he deliberately makes the 'conscious effort to use the worst typeface at hand in an interesting way', as displayed in Figure 4.11. This debate on style (font) over content (text) has been discussed at length (Heller, 2001; Bierut, 1994, 2002; Holland, 2001). What is required here is a recognition that typography's main function was to bring writing into a form, that is, to materialise writing into a tangible, readable format. However, in recent times, with the advent of the computer, the intra-system of typography has acquired meaning potentialities. The system network for typography is presented in Figure 4.12 on the next page.

Figure 4.11: David Carson's style over content
(reproduced from Blackwell, 2000, unnumbered)
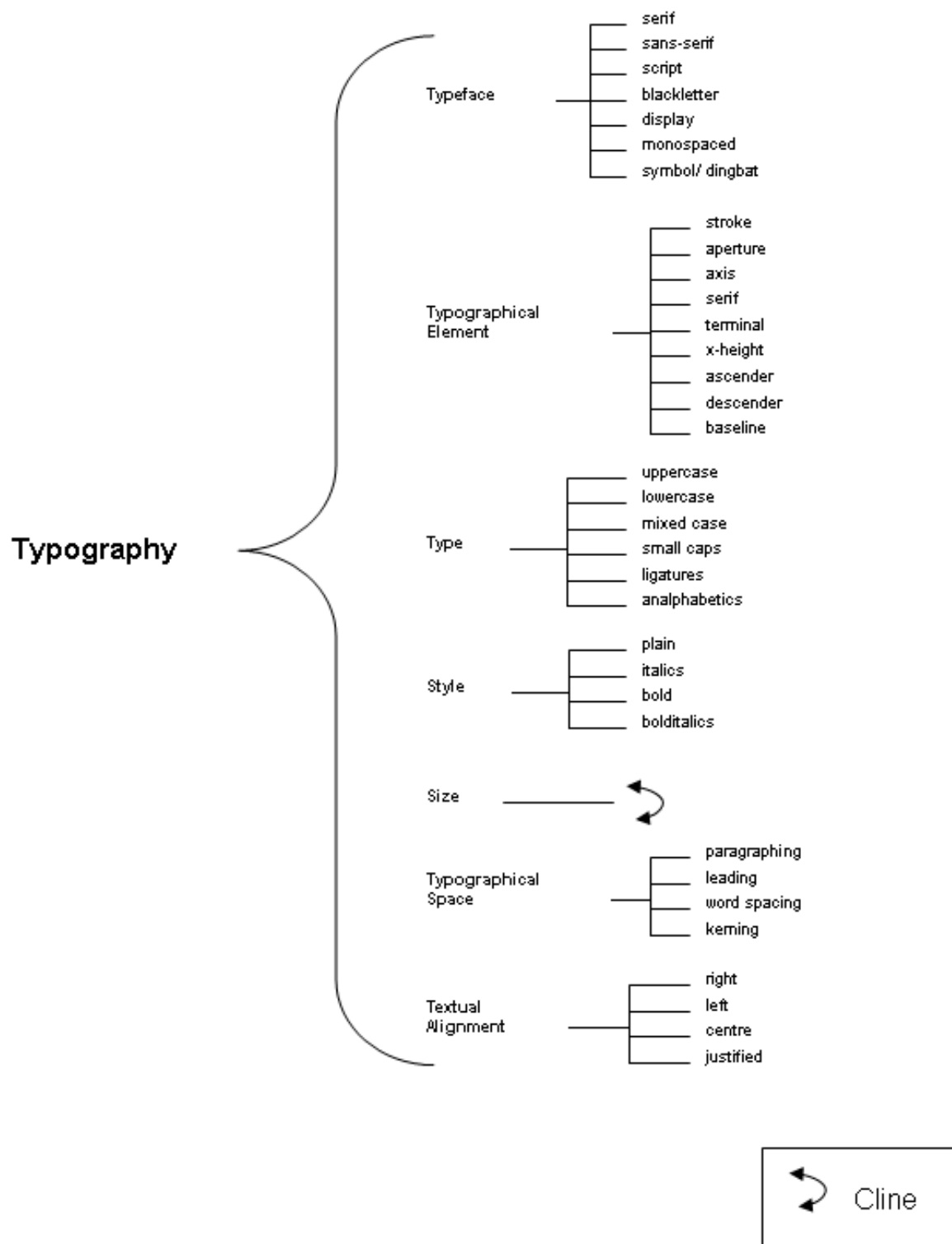
Figure 4.12: System Network of Typography

4.4.1. TYPEFACE

The visual quality of type resides not just in its material manifestation in words, sentences or paragraphs but also in the shape and structure of each single letter. Each letter is designed precisely under the often-considered clandestine art of typographical studies. The single construction of each letter is expanded to the complete creation of the entire alphabet with the same attention to detail. The complete creation of the alphabet gives rise to the concept of 'typeface' or vernacularly termed as 'font'. Typefaces can fall into the basic categories of serif, sans-serif, script, black letter, display, monospaced or symbol/ dingbat and should be represented visually rather than explained linguistically, hence, see Figure 4.13.

Figure 4.13: Basic Categories of Typefaces

This categorisation is not definitive as typographers have their own principles of categorisation, either from the perspective of visual quality, historical influence or in arbitrary terms based on personal preference. In display text where the primary function of the linguistic semiotic resource is to attract the attention of the reader, typefaces are often chosen for their bold, loud and unique qualities. In contrast, for body text, in which the retention of the reader's attention takes priority, typefaces are chosen for its legibility and readability. Tests have been conducted to verify the reading speed of these typefaces. However, it is often noted that readers are able to read even the most intelligible font if used often enough. Roman characters in full capitals were the norm during the Roman empire (Bierut, 1997).

4.4.2. TYPOGRAPHICAL ELEMENT

A detailed analysis of a typeface will result in a microscopic view of its constituent letters. Each letter can be further characterised by elements of stroke, aperture, axis, serifs, terminal, x-height, ascender, descender and baseline as displayed in Figure 4.14.
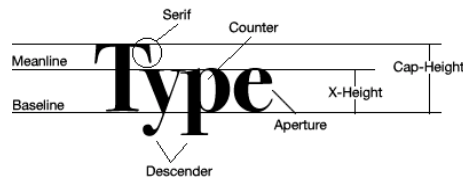
Figure 4.14: Elements of a Letter

The subtle removal of serifs of a font can recreate the font into a new creature. The elements of each letter may seem insignificant but when placed together in a string of text, appearing as a typeface, these very elements become their natural features. It is likened to a human person. The shapes of the eyebrows, nose, ears, mouth and head determine the overall facial portrayal of the person. When any element is distorted, the face is greatly affected. The lack of an eye draws attention to the face. Similarly, the lack of an aperture in the letter 'a' can draw attention to the letter (see Figure 4.15) and as a result, affects its final symbiotic meaning.

Figure 4.15: Lack of Aperture

4.4.3. TYPE

Other elements which can affect the modal quality include 'type'. UPPERCASE DRAWS ATTENTION TO ITSELF WITH ITS TALL AND COMMANDING QUALITY. It is often noted that the accidental depression of the caps-lock key of an inexperienced digital netizen can cause unnecessary comments on his or her netiquette. In contrast, the use of entirely lowercase may perceived as humility, especially with the letter 'i', subjecting oneself to a smaller identity than a PRO-NOUN. ee cummings' intention to leave everything to lowercase may suggest an intention to reveal everything in the most harmless form. In our

current literary culture, mixed case has become a tool for structuring thoughts. Analphabetics are the correct typographical term for punctuation marks and plays a supporting role to the Mood system. Commands can use exclamation marks! Questions and offers can use question marks, '?' while statements, full-stops and commas. Full stops terminate sentences. Commas, has a tendency to deliberate, but it is in effect, the tri-sequence of the full stop-space-capital letter which provides the visual significance of terminality. without it, sentence words phrases clauses will appear to flow... Ligatures are combination of letters to address the issues of overlapping in some letters, see Figure 4.6. They can further accentuate the invisibility of the crystal goblet.

$$AE \rightarrow \text{Æ} \quad ij \rightarrow \text{ÿ}$$
$$ae \rightarrow \text{œ} \quad st \rightarrow \text{ſt}$$
$$OE \rightarrow \text{Œ} \quad ft \rightarrow \text{ft}$$
$$oe \rightarrow \text{œ} \quad et \rightarrow \text{\&}$$
$$ff \rightarrow \text{ff} \quad fs \rightarrow \text{ß}$$
$$fi \rightarrow \text{fi} \quad ffi \rightarrow \text{ffi}$$

Figure 4.16: Examples of ligatures

4.4.4. STYLE

The use of the word, 'style' is a misnomer. Style connotes an objective to create a distinct entity in order to differentiate and even distance itself from the family of typefaces. However, in this case, style is often considered part of the family. In the creation of a proper typeface, most typographers are obliged to create different styles: members of the same family who can live and play together in the same space happily. Plain and ordinary should go well with loud and obtrusive bold, and in the same room, italics and bold italics are not out of place but residing in harmony. They are different in characteristics and idiosyncrasies but they are still family. A non-family member is always quite obvious and do not have the same style as them (as displayed in Figure 4.7)

Regular

ABCDEFGHIJKL
MNOPabcdefghijkl
mnop&123456789

Semibold

ABCDEFGHIJKL
MNOPabcdefghijkl
mnop&123456789

Black

ABCDEabcde12

Bold

ABCDEFGHIJKL
MNOPabcdefghijkl
mnop&123456789

Italic Regular

ABCDEFGHIJKLM
NOPQRSabcdefghijkl
mnopqrs&123456789

Italic Semibold

ABCDEFGHIJKLM
NOPQRSabcdefghijkl
mnopqrs&123456789
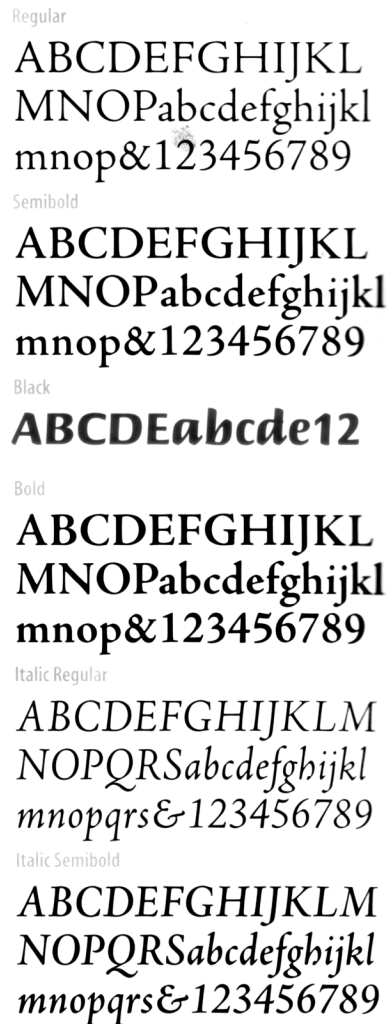
Figure 4.17: A Non-family member

4.4.5. SIZE

Size is measured in points but in fact, the correct measurement is pica. The size of

every single letter plays a significant role in the display of an entire sentence or w**O**rd. It can

affect the visual quality of the sentence or the word itself. In our case, the letter 'O' is

supersized to draw visual attention to the word. In addition, it can raise certain questions as to

why the letter 'O' is enlarged. Size affects the modal significance of letters, words and

sentences. Appearing as a word or a sentence, they become 'headlines', visual-verbal

instruments which draw attention to the entire graphic text. Headlines, by definition of the

word, should draw attention to itself as much as possible and one of its available affordances is its font size (see Figure 4.8).
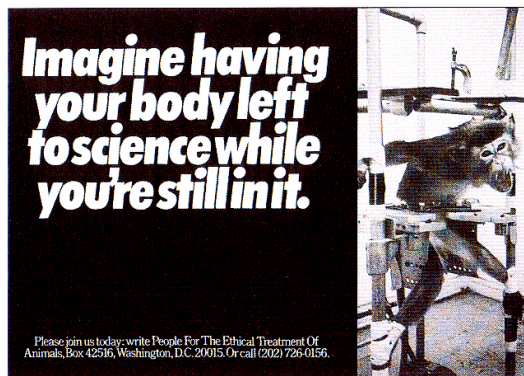
Figure 4.18: Size of Headlines

4.4.6.   TYPOGRAPHICAL SPACE

Typographical space occurs in between paragraphs (which is known as paragraphing), lines (leading), words (words spacing) and letters (kerning). The space in between paragraphs can disrupt the reading of the lexicogrammar; paragraphs which are consistently spaced belong to the same flow of thought, a sudden break can seen the introduction of a new subject.

Leading can increase the reading speed or slow down the reading speed. A small leading space creates a high tension in terms of text density which disables reading while a too large

leading space creates too much space in between, making the reading difficult as the reader

have to make extra effort in connecting the lines of words. Words are spaced to either provide

a regular reading rhythm or a staccato reading rhythm. Finally, kerning is of paramount importance if the word is displayed in a large size. A well-kerned word is known to has good proportional structure—the space in between each letter is more or less equal in terms of volume. Typographical space is employed to create tension or proportional balance in the

reading of the text which ultimately is inextricably linked to its interpersonal and ideational meanings.

4.4.7. TEXTUAL ALIGNMENT

Textual alignment refers to the alignment of the actual body text. Text can be aligned right, left, centre or justified along straight vertical lines; these vertical constraints are also known as column guides in a grid. Right alignment and justified alignment is comparable in terms of reading speed. The jagged lines of right and left alignment creates variety to the entire column of text, while a fully-justified column of text helps to define the line demarcating that particular column clearly. A centre aligned text is uncommonly used in the body copy but appears as headlines typesetted in large font spanning the entire spatial space and thus, providing the entire space with an innate balance.

The intra-system of typography, residing within the linguistic semiotic resource, affords users with a large potential of meaning-shaping tools which can ultimately bring attention to itself or become a transparent crystal goblet.

4.5. CONCLUSION

In chapter 1, graphic design and its criticism were problematised, resulting in a need for an appropriate framework for the analysis of graphic design texts of the printed medium. Subsequently, various SF frameworks were analysed in chapter 2, only to unravel certain issues which need to be addressed and have been addressed at length in chapter 3. The balanced approach using a 'toolkit' concept was to be found in Lim's (2002, 2004) SF framework. In this chapter, issues within Lim's framework are resolved as well as the elucidation and elaboration of inter- and intra-systems are undertaken in order to address the significance of these systems functioning within the two semiotic resources. In the subsequent chapter, the SF framework will be applied to the analysis of a graphic design text, using the appropriate and relevant 'tools' from the toolkit.

5. CHAPTER 5: APPLYING THE SF FRAMEWORK

In order to prove that the SF approach as a viable approach for the analysis of graphic design texts of the printed medium, it is imperative to apply the SF framework, that is, IMM2 on an authentic graphic design text. The graphic design text in question is presented on the following page as Figure 5.1. I suggest the reader to make an attempt to understand the text before I embark on the SF analysis of the text.

5.1. BEGINNINGS

At the first reading of the text, the reader may be shocked at the visceral quality of the text, at how the body suffers from the lacerations. It evokes memories of the lacerated Christ figure, visually captured in Mel Gibson's *The Passion of Christ*. The reader, then, posits the question, 'Is this for real?'. After the initial shock is over, the reader tries to figure what is the entire Text is all about through the carved letterings on the body. The reader may either adopt a linear reading path from top to bottom and left to right, or a 'recursive scanning process' (O'Halloran, 2005: 162) in which one 'sets up connections between the different elements' (Kress and van Leeuwen, 1996: 205), a hypertextual reading.

The experienced reader of multisemiotic texts with relevant knowledge may be able to obtain the message of the text. However, this 'process of reading' performed intuitively is of interest to researchers. The reading process needs to be deconstructed in order to discover how intuitive readings of the text actually take place, how text and images combine together to form multiple meanings so effectively and what are these multiple meanings.

5.2. COMPOSITIONAL MEANINGS

Firstly, through the application of the 'Rank Scale' principle (Halliday, 1984), 'Clusters' (Baldry and Thibault, 2006) can be determined in order to aid the SF analysis of the graphic design text. As a result, a nomenclature for discussion as well as an interpretation of how the text is being organised spatially are constructed. At the same time, Compositional meanings in terms of Information Value, Salience, Framing, and Balance and Symmetry (Kress and van Leeuwen, 1996, 2006) are discovered.

5.2.1. WORK

First and foremost, at the 'Work' level (O'Toole, 1994), the format should be determined to ascertain what is the maximum amount of space available and whether this space bears any significance to the composition of the entire page. I did not manage to obtain the original poster hence the size of the advertisement cannot be determined. However, I did manage to obtain a version of the image from the designer. Although the actual size cannot be

determined, it is still possible to derive the ratio. The original image measures 246.6mm in height x 171.7mm in width, giving a ratio of 1:1.436. The closest match with this ratio is the 'executive size' of 267 mm x 184 mm. However, this size is deemed too small to be a poster. Hence, the deduction is that the working size of the poster may be twice this size and may be close to the standard ISO ratio of 1:1.4142.

What is noticeable is the fact that the entire space available is largely dominated by the human body. In effect, the human body becomes the tactile medium with its intrinsic human materiality. It becomes the canvas within the graphic design text—a human compositional structure within the paper's compositional structure. Hence, the dimensional quality of the human body overtakes the proportions of the page to become the primary compositional structure based on its Informational Value, Saliency and Framing. It determines the margins and the space available. Instead of the format of the paper—its size and dimensions, the body becomes the frame and the canvas for the text—its volume dominating the entire space.

It is also important to note that the human body is incomplete—it is cut off at its head and the pelvic area and legs. It becomes an unusual composition of the torso. The human body, though irregular in its framing, exudes a grid structure which is defined by natural anatomical construction. The background, which has vertical lines running down from top to bottom, parallels the foreground: the natural vertical structure of the body. The vertical alignment of wordings on both of the arms of the model reinforces this verticality. Finally, the verticality of the Work is captured by the growth of body hair in a straight line from the chest to the pelvic area, dividing the Work into two equal halves (columns 1 + 2 and columns 3 + 4) as displayed on Figure 5.2.

However, the body, though vertical in its entirety, is also horizontal in its divisions. These horizontal divisions are exemplified by the wordings which run horizontally instead of vertically on the main torso of the body and its division of the space into 4 equal horizontal segments (rows A, B, C and D). Natural structures evident in the body such as the pairing of parts reinforce the horizontal inclinations.

At the Work level, the text's compositional structure is strictly defined by a grid like layout with horizontals and verticals intersecting one another based on the human body. Evoking the natural principles of proportion in the human body, this graphic design text is related to the ubiquitous drawing of the *Vitruvian Man* by Leonardo da Vinci (displayed as Figure 5.3), conveying a sense of perfect proportion to the reader unconsciously or deliberately, assuming the reader recognises the similar symmetrical structures available in both the human body presented and Leonardo's drawing of the human body.
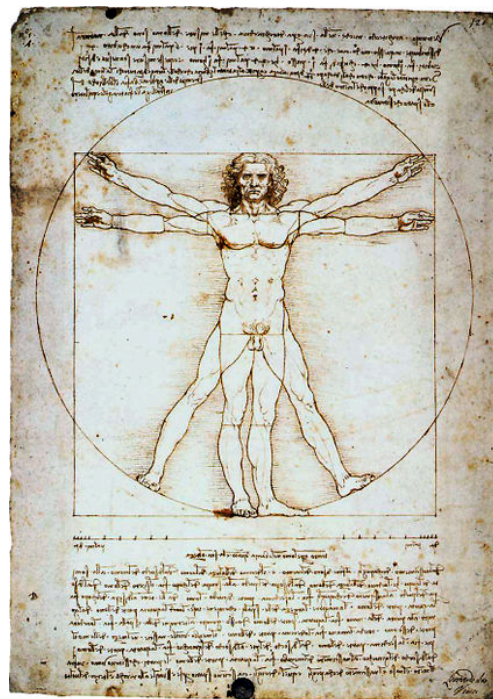
Figure 5.3: Vitruvian Man by Leonardo da Vinci
(reproduced from http://en.wikipedia.org/wiki/Image:Vitruvian.jpg)

5.2.2. CLUSTER

Since, the text is dominated by the shape of the human body, it is appropriate to divide the Work into its different Clusters based on the human anatomy. As mentioned earlier, the most apparent division of the human body is to divide the human body into two relative equal parts down its central axis. Secondly, to create a torso (an anatomical construction without the head and limbs), two vertical lines are drawn to remove the two arms from the body, thus creating columns 1, 2, 3 and 4 (as displayed in Figure 5.2). A horizontal line

cutting the head at the chin level forms the torso. Subsequently, the torso can be further divided into various Clusters. The inscribed horizontal line across the body together with the two armpits provide one of the divisions. The final division is across the umbilicus or commonly known as 'navel' or 'belly button'.

As a result, the following Clusters and its formative Cells are obtained: right arm (the model's right; this convention applies henceforth) are framed by Cells C1 + D1, the left arm by Cells C4 + D4, head by Cells A2 + A3, chest by Cells B2 + B3, main part by Cells C2 + C3 and navel area by Cells D2 + D3. The final grid structure and divisions of space into its respective Clusters and Cells can be seen in Figure 5.2. A precise grid system based on the human anatomical structure provides a standard nomenclature for the identification of the exact parts which will be employed in the discussion.

With these compositional divisions, the sub-system of Framing (Kress and van Leeuwen, 1996, 2006) becomes apparent. Firstly, symmetrical balance is achieved through the vertical balance between columns 1, 2, 3 and 4. This balance is accentuated by the fact that there are dialogic binary configurations of the shoulders, nipples and arms placed on either side. The middle intersecting line acts as a 'mirror', laterally inverting similar Elements. Another interesting observation is that rows B + C form a perfect square containing the majority of the linguistic Elements. The divisions conform to the natural inclination and anatomical structure of the body to form a symmetrical composition.

However, even with this unmistakable symmetry, we are uncomfortable to label the entire Work as exuding perfect symmetry like that of Leonardo da Vinci's *Vitruvian Man*. Upon closer observation, certain Elements of asymmetrical balance surface. Firstly, the head is not centralised but tilted to the right. The majority of the head falls under Cell A2 instead of being equally divided between Cells A2 and A3. Another factor is the intrusion of the left hand into Cell A3 instead of hanging down like Cell D4. This asymmetrical deliberation destabilises the internal structure of Cell D3, similar to an 'earthquake', recreating the space into a multi-dimensional space of ridges and valleys, *vis-à-vis* the flat plane of the right arm.

Although maintaining the rectangular structure of the left arm, the interjection recreates the space to create **asymmetry** with the right arm.

In conclusion, although the divisions of Clusters accentuate the delicate symmetry and proportion intrinsically available and afforded by the human body, there seems to be an intention to disrupt this harmonious symmetry through the introduction of extraneous Elements into the text.

5.2.3. ELEMENTS

At the rank of Elements, we have further evidence of these asymmetrical balance, through Lines and Shapes (Dondis, 1973). Instead of aligning themselves to the natural symmetry of the body, certain Elements destabilise the symmetry, giving rise to an even more asymmetrical composition than previously assumed. The nipples together with its areas of pigmented skin are anatomically circular and are defined by circles, creating a natural symmetry afforded by the human body. However, under closer scrutiny, the addition of extraneous Elements to the left and right nipples disrupts the symmetrical balance. The addition of strokes emanating from the right nipple expands the circular boundary; this is in direct contrast with the rectangular shape of the plaster interjecting the circular dimensions of the left nipple. A unique asymmetry is formed between the now expanded circle and the amalgamated shape. The asymmetry is further enhanced by the fact that they are positioned at the centre of the text in the critical positions of the main Cluster formed by Cells C2 and C3.

Employing the intra-system of Typography, the kerning in between letters are irregular due to the fact the wordings appear to have been carved into the skin—a difficult medium for 'writing'. However, there are attempts to create regular kerning. In Cells D2 and D3, the smaller wordings are kerned tighter while the larger words in the other cells are kerned wider. As a result, abiding to typographical principles, the size of kerning corresponds to the size of the text.

However, the baselines (that is, the imaginary lines on which the sentences rest on) do not rest on the horizontal lines of the grid but slant up and down in creative abandon, thereby

destabilising the horizontal grid structure. In Cell C3, the words 'Academy of Art' are not rested on a straight line but is haphazard in its treatment. It is also interesting to note that the baseline shifts are also affected by the structure of the body. For example, the line '& CRANBROOK' slants upwards in order to accommodate the left nipple. This is also evident in the word, 'SPONSORS:' in Cell D3, which is slanted upwards to fit into the limited space and contours of the pelvic area.

The huge word, 'SAGMEISter' spannning the entire row B, is fully justified as it covers the entire possible space afforded by the shoulders. This is in contrast with most of the wordings which are right-aligned or left-aligned. While there appears to be no consistent alignment, again like kerning, there is a certain amount of consistency in relation to the linguistic Elements' positionings in the various Cells.

Observing it holistically, the linguistic Elements, while maintaining a sense of decorum, in fact, do **not** convey a sense of obedience to the grid structure, instead, they carve out their own paths on the available canvas, creating unusual spatial relationships between them.

5.2.4. CONCLUSION

In this graphic design text, it is evident that the human body is celebrated as the perfect canvas for design with its innate symmetrical proportions, evidenced by the compositional structure and the grid divisions. However, this symmetrical balance is disrupted by Clusters and Elements, revealing a deliberate attempt to achieve asymmetrical balance instead.

5.3. INTERACTIVE MEANINGS

5.3.1. WORK

Based on Medium and Materiality, the graphic design text is probably printed on paper using normal CMYK printing. Until we obtained an actual copy of the poster, we cannot ascertain the other material qualities of the poster, for example, whether it uses the

sub-system of finishing or other effects. This lack of this knowledge, however, should not prevent us from investigating the overall interpersonal quality of the text.

The overall Attitude (Kress and van Leeuwen, 1996, 2006) of the text is direct as the reader does not view the text from a top-up or bottom-down angle. Texts which employ this direct angle achieves a highly involved relationship with the reader. This text would have appeared quite differently if the angle is from the top or bottom. In its entirety, the text's frontal directness is unsettling.

Although, the tactile texture may be two-dimensional; however its entire visual texture is 3-dimensional, showing a detailed and naturalistic photograph of a human body. Compared to a symbolic representation of the human body (vis-à-vis *Vitruvian Man*), the naturalism creates a heightened sense of Modality (Kress and van Leeuwen, 1996, 2006) or truth. Its truth-value is in fact intensified by the fact that it appears to be a real photograph of a human body being engraved with letterings. This heightened sense of modality is further enhanced by the employment of the inter-system of Colour. The analogous colour palette comprising of hues of dark red, black, pink, orange and brown resonates with the natural flesh tone. The entire text with its intense modality addresses the reader directly with an almost confrontational and uncomfortable stance.

5.3.2. CENTRAL VISUAL IMPACT

On the onset, compositionally, the body's large size in proportion to the size of the poster may be a major reason for it being the 'Central Visual Impact' (hereafter, CVI; Bohle, 1990). However, it must be attested that size alone does not determine a CVI; other visual features of the body also play important roles. Being homo-sapiens ourselves, the anthromorphic quality of the body already attracts us to the poster, added to this quality is the fact that the body is essentially naked and highly mutilated, hitting our senses with sensual shock. Besides this, its frontal lighting creates highly accentuated bright flesh tones set against a dark coloured background of dark red curtains. This propels the body to the foreground, creating a highly marked contrast between figure and ground (Kress and van

Leeuwen, 1996, 2006). This resembles the chiaroscuro effect of mannerist and baroque artists where the portraiture is often lighted to a high degree in contrast with the background, creating an intense relationship with the reader.

The other important system which confirms the status of the CVI is the system of Gaze (Kress and van Leeuwen, 1996, 2006). Probably for purpose of anonymity, the model's face is cropped away, leaving only the lips and chin, obliterating the obvious human gaze. However, the body replaces this human gaze: its eyes are replaced by the nipples and its mouth is replaced by the navel. It is interesting to note that the upturned lower lip parallels the navel's 'lips'. Although, the human gaze is lost in the process of protecting the model's identity, the Work's gaze is grotesquely maintained by using features of the body to recreate the body into a quasi-face with a tragic look. This is relevant and true to its melancholic expression in view of the destructive multiple scars on its 'face'. In this process of bodily substitution, the human body is transformed into another anthromorphic alien form: a large face with arms emanating from its head, appalling the reader with its direct gaze. It seems to be appealing to us with its doleful expression, asking for help or pity.

In conclusion, in addition to its already large size in proportion to the format of the page, other visual Elements provide the body with sufficient material to exist as the *de facto* CVI. Interpersonally, the body becomes the main focus of attention and even attains a divine status with its bodily halo-glow in the midst of the background of darkness, thus celebrating the body as the pristine vehicle for attraction, presentation and information.

5.3.3. CLUSTER

Interpersonally, the disparate Clusters establish a rhythm of contrast and repetition with no apparent emphasis on any particular Cluster. They employ the inter-systems of Tactility and Colour effectively. Holistically, they are either defined by the textural and color quality of human flesh: pinkish-white with an orange glow or the highly contrasted dark red background of curtains. The rows B, C and D (except column 4) are also bound cohesively by

the bloody cuts of red text which seem to have a macabre glow to it. In its entirety, they are similar in their tones, saturation and hue.

Although they are similar in their natural quality, the light casts on the various Clusters creates different shades or values of the Clusters: alternating between bright and dark, bathing in light or hiding in shadows. Further subtle lighting effects can be noted: row B seems to have a brighter tonal value than the rest, highlighting the words 'STEFAN SAGMEISter'. This can easily be transcribed into a linear reading path. Since it has the highest tonal value among all the Clusters, the reader begins at this point and starts reading from top to bottom and left to right. In their entirety, the graphic design text is cohesive but it is, by no means uninteresting: the Clusters combine together to create a 'new' albeit sensual medium; a dynamic 'skin' landscape of organic shapes, challenging the reader to rethink how the parts interact with one another and the functions of the various body parts as a conduit for textual inscription.

However, there are Clusters which do not resonate with the rest. In row A, contrast is unmarked where the partial head remains shrouded in the dark red background. Besides being dwarfed by the curtains' sheer volume, the head's tonal quality is dark, almost blending into the reddish-dark background. It is also the only bodily part without any linguistic writing. It becomes a conundrum as the very purpose and function of its existence is questioned since it is neither a vehicle of information like the other parts of the body nor foregrounded like the other Clusters. Hidden and disappearing into the curtains with a half-cropped face, this Cluster's function and meaning needs further analysis.

Similarly, in column 4, the left arm also appears to be contained in this darkness and seems to extend from the darkness into the brightly-lited foreground. Again, it is not marked by carvings of text. Within this column is the box of plasters found in Cell D3. It is predominately blue in colour thus highly contrasted against the pinkish flesh tones and the dark red background. Its vector (Kress and van Leeuwen, 1996, 2006) is also interesting: it is derived from the angle of the hand, pointing downwards diagonally beyond the boundaries of the page. This diagonal vector seems to parallel that of the plaster found in Cell C3, creating a

link between them while emphasising the vectorial difference between them and the overall grid structure (see Figure 5.2).

Clusters are bound by the naturalistic and textural quality of human flesh contrasted against the dark background, however, it appears that some Clusters are not altogether content with the *status quo* and are determined to upset the apparent harmony like seditious elements within a totalitarian calm.

5.3.4.   ELEMENT

A certainty is that the Typography on the body canvas is not machine-generated but hand-crafted, whether it is for real, that remains to be seen. It is largely consistent among the various sizes with some interesting deviations. Its typeface seems to be limited by the technique of execution, hence employing sans serifs and uppercase. A deviation which is significant is the letter 'G' on 'SAGMEISter' in Cell B2; it has an empty outline. Its typeface differs from the letters in that word, in fact, the last three letters, 'ter' are also typesetted in a different typeface. This script-inspired typeface also reappears in the words 'Style' and 'Auditorium'. Although, the typeface may be constrained by the technique and the body canvas, the designer still consciously deviate from the typeface.

Certain Lines (Dondis, 1973) are significant. The line below the word 'SAGMEISter' is significantly long and has a left-to-right projection, below it are small short lines which emphasise the line and its vectorial quality. Three short, straight lines emanate from the right nipple, providing the right nipple and area with an intensified modality. The oval box surrounding the phrase 'Style = FART' highlights the phrase, however, it is not completed.

In terms of Form (Dondis, 1973), rectangles structure the text through a grid-based system afforded by the compositional quality of both media of paper and body. However, upon closer observation, a complicated multi-pyramid structure can be elucidated (as displayed in yellow lines in Figure 5.2). Row B contains a triangular or a pyradimic structure with its base resting on the line intersecting rows B and C. As a mirror image, in row C, a pyramid is inverted with its base against the previous pyramid's base, cutting across the

nipples and finally concluding its apex at the navel point. While at the navel point, another pyramid arises, following the boundaries of the pubic hair and ends at the edge of the format of the page.

The 'natural' quality of the canvas does not restrict the designer from creating Elements which bear distinct visual qualities apart from the seemingly consistent Work. These Elements are purposefully placed within the entire context of the nude body to underscore and (re)create meanings within the entire text, thus becoming clues to understanding the text holistically.

5.4. MESSAGE

To understand the message of the text, we will look at how the various Clusters interact in terms of intra- and inter-semiosis through the semantic choices made either from the linguistic or visual semiotic resource.

5.4.1. INTRASEMIOSIS IN THE VISUAL SEMIOTIC RESOURCE

It is important to note at this stage that though it is obvious to the reader that the body is the CVI since it is the only object which dominates the entire text, it must be reiterated, however, that compositional and visual Elements afforded this identity. The large size and sublime symmetry of the body within the format of the page provide us with saliency while the gaze, visual interplay of the Clusters affirms the CVI. The CVI is the only apparent visual image and since it comprises of all of the text, in effect, the CVI is the text. However, we want to expand beyond this concept of the visual image by not looking at the materiality of the image *per se* but by looking at the apparent image (which takes up the entire spatial affordance).

Therefore, besides the body functioning as the primary visual image, the nipples, the plaster, the visual letterings, the half-face, the arms, the pubic hair, the navel, the hand and the box of plasters can all be considered as visual images and in consequence, 'represented participants' (Kress and van Leeuwen, 1996, 2006). Indeed, after the initial sensual shock is over, the first intrasemiosis which comes to mind is the analytical process which relate

participants in part-whole structures. The highly visceral body becomes the Carrier, mutilated to a large degree, hence, the countless carvings act as Possessive Attributives of this tortured Carrier. This leads us to ask questions about the Carrier. Why does he want to be hurt in this manner and carry all the burdens? Why is he carrying the box of plaster? I attempt to answer these questions in section X. For now, we understand that this body is not simply an image but a suffering Carrier of inflicted Possessive Attributes.

The second process which is of relevance is the narrative process. The body becomes an Actor of a non-transactional narrative process. There is no apparent Goal. The lack of eyes of the head creates a 'blind' gaze with no Recipient. The vectorial angle of the box of plasters can be viewed as declining rather than inclining (which occurs in offers), hence, the Actor does not seem to want to offer the reader the box of plasters in the first place. (Anyway, he seems to need it more than us).

In replacement of this emotionless and unresponsive Actor, there is another zoomorphical form staring at the reader. The salient quality of its face is undeniable, framed in the centre and surrounded by two pyramidic structures. The accentuated right eye with the three cut marks and the hurting left eye with a plaster together with the navel (which parallels the upturned mouth) reveal this sad creature to the reader. Its gaze is direct. It does not want to offer anything. It seems to be asking for understanding; it is a forlorn image of abandonment.

These observations may not be meaningful at this point but it serves to highlight how the visual Elements interact with one another to create symbiotic intrasemiotic meanings. The nipples, navel and lacerations create a gestalt visual figure of a zoomorphic quasi-face. This has not been possible if the disparate Elements exist alone. It is only possible through intrasemiosis.

5.4.2. INTRASEMIOSIS IN THE LINGUISTIC SEMIOTIC RESOURCE

In order to discover the process of intrasemiosis within the linguistic semiotic resource, I employ SFG to analyse the linguistic text. SFG systems of Mood, Transitivity and Theme are employed to deconstruct the linguistic text.

Firstly, the phrase, 'STEFAN SAGMEISter' becomes the starting point. On the onset, the meaning of the phrase is unclear, however, from the reader's knowledge of names, it can be assumed that it is a name of a person. However other questions arise as a result: where does this name comes from? Does it sound Swedish? Or Scandinavian?

For a name to become a name, it needs to belong to a Carrier. This becomes apparent in the Mood system where the subject 'realizes the thing by reference to which the proposition can be affirmed or denied. It provides the person or thing in whom is vested the success or failure of the proposition' (Eggins 2004: 151). There is a need to know who the name belongs to, hence the most obvious solution is to prefix it with a Mood element. Since the body is the CVI and the name appears to be the most significant Cluster based on its saliency and compositional placement, it is highly plausible that the person is called 'Stefan Sagmeister'. The clause with the elliptical MOOD element is analysed in Table 5.1.

CLAUSE 1	(I	am)	STEFAN SAGMEISter
MOOD	Subject	Finite	Complement
	MOOD		Residue
TRANSITIVITY	Token	Relational Process: Identifying: Intensive	Value
THEME	THEME (topical)	RHEME	

Table 5.1: Analysis of Clause 1

Subsequently, the reader is faced with another slew of names: 'AIGA DETRIOT & CRANBROOK ACADEMY OF ART'; which one can assume that they belong to the names of an association probably based in Detroit and an art school respectively (with the key word

being 'academy'). We are unable to identify the Tokens for these Values, hence, we will treat them as what they are – lexical items expressed in nominal terms. They are analysed in Table 5.2.

NOUN PHRASE	AIGA DETROIT	&	CRANBROOK ACADEMY OF ART
LEXICAL ITEMS	NOMINAL GROUP	CONJUNCTIVE	NOMINAL GROUP

Table 5.2: Analysis of Lexical Items

Moving downwards, an oval-shaped object framing the words, 'Style = FART' can be seen. An SFL analysis by substituting the mathematical symbol with a linguistic equivalent is represented in Table 5.3.

CLAUSE 2	Style	= (equals)	FART
MOOD	Subject	Finite / Predicator	Complement
	MOOD		Residue
TRANSITIVITY	Token	Relational Process: Identifying: Intensive	Value
THEME	THEME (topical)	RHEME	

Table 5.3: Analysis of Clause 2

However, this enigmatic equation is still inexplicable. The next Cluster states: 'THURSDAY, FEB 25, 1999', 'de SALLE Auditorium AT CRANBROOK' and '6:30 pm'. With knowledge of the genre of events announcements, one can insert the elliptical Mood elements. The SF analyses for these are displayed in Tables 5.4 to 5.6.

CLAUSE 3	(The date	is)	THURSDAY, FEB 25, 1999
MOOD	Subject	Finite	Complement
	MOOD		Residue

TRANSITIVITY	Token	Relational Process: Identifying: Intensive	Value
THEME	THEME (topical)	RHEME	

Table 5.4: Analysis of Clause 3

CLAUSE 4	(The venue	is)	de SALLE Auditorium AT CRANBROOK
MOOD	Subject	Finite	Complement
	MOOD		Residue
TRANSITIVITY	Token	Relational Process: Identifying: Intensive	Value
THEME	THEME (topical)	RHEME	

Table 5.5: Analysis of Clause 4

CLAUSE 5	(The time	is)	6:30 pm
MOOD	Subject	Finite	Complement
	MOOD		Residue
TRANSITIVITY	Token	Relational Process: Identifying: Intensive	Value
THEME	THEME (topical)	RHEME	

Table 5.6: Analysis of Clause 5

The insertion of these elliptical Mood elements are not perceived as presumptuous because of our knowledge of the genre of event announcements. The schematic structure for events announcements is represented in Figure 5.4.

Title ^ Date * Time * Venue * Cost * (Speaker] * (Synopsis) * (Credits)

Figure 5.4: Schematic Structure for Event Announcements

The notations of 'X ^ Y' means that stage X precedes stage Y, '* Y' means that stage Y is an unordered stage and bracketing suggests optional items (Eggins 2004: 64)

The appearance of the elements of date, venue, time in the text confirms the assumption. The title of the event appears to be missing. Returning to the previous two clauses and phrase, 'STEFAN SAGMEISter' appears to be the title of the event because of its salience and compositional placement. The noun phrase 'AIGA DETRIOT & CRANBROOK ACADEMY OF ART' becomes more comprehensible—since Cranbrook is where the event is taking place, it would mean that the event is presented by AIGA Detroit and Cranbrook Academy of Art.

It should be highlighted that up to this juncture, while a mostly linear reading path has been undertaken, a recursive reading of the lexicogrammar is also plausible. In multimodal texts, recursive reading is a common strategy which readers adopt as they attempt to come to terms with the multiple and multifarious meanings in order to reach a 'comfortable' understanding of the text based on the intersemiotic and intrasemiotic meanings.

Confirming the deduction that this is indeed an events announcement poster, the subsequent clauses are analysed and displayed in Tables 5.7 and 5.8.

CLAUSE 6	Donations	(are)	• PRINTING BY GRAPHIC ENTERPRISES • PAPER BY NATIONWIDE PAPERS • ENGRAVING BY ADGRAVERS • PHOTO BY TOM SHIERLITZ
MOOD	Subject	Finite	Complement
	MOOD		Residue
TRANSITIVITY	Token	Relational Process: Identifying: Intensive	Value
THEME	THEME (topical)	RHEME	

Table 5.7: Analysis of Clause 6

CLAUSE 7	Sponsors	(are)	• BLACK WHITE & COLOUR • ARMSTRONG/WHITE • NATIONWIDE
MOOD	Subject	Finite	Complement
	MOOD		Residue
TRANSITIVITY	Token	Relational Process: Identifying: Intensive	Value
THEME	THEME (topical)	RHEME	

Table 5.8: Analysis of Clause 7

By simply replacing the colon with the linguistic equivalent, 'be', it is easily concluded that these are the credits element in the schematic structure as postulated earlier. Based on the confirmed knowledge that this is an event announcement poster, the following SF analyses become apparent and are represented in Tables 5.9 and 5.10.

CLAUSE 8	AIGA	MEMBERS	(enter	for)	FREE,
MOOD	Subject		Finite	Complement	
	MOOD			Residue	
TRANSITIVITY	Actor		Process: Material	Circumstance: Manner	
THEME	THEME (topical)		RHEME		

Table 5.9: Analysis of Clause 8

CLAUSE 9	NON-MEMBERS	(pay)	$5-
MOOD	Subject	Finite	Complement
	MOOD		Residue
TRANSITIVITY	Actor	Process: Material	Circumstance: Manner
THEME	THEME (topical)	RHEME	

Table 5.10: Analysis of Clause 9

However, even with this knowledge that it is an events announcement poster, the reader is still faced with an unsettling conclusion. The reason is that although the lexicogrammar has been explicated through SFL analyses, the enigmatic CVI is still not addressed. Hence, in a multisemiotic text, the reading of the text is not only recursive but in fact, 'iterative' where it is necessary to link all the multifarious meanings produced by the various semiotic resources together in order to obtain the final congruent meaning through intersemiosis.

Before we proceed to the intersemiotic analysis, I want to highlight a hidden clause which is surreptitiously hidden on the left arm. It reads, 'STEFAN LOVES ?'; we are unable to decipher the name of the one being loved. However, this confirms the previous deduction that 'STEFAN SAGMEISTER' is a name with our genre knowledge of tattoos.

The SFL analysis is shown below in Table 5.11 but a detailed exposition on it is suspended for the time being.

CLAUSE 10	STEFAN	LOVES	?
MOOD	Subject	Finite	Complement
	MOOD		Residue
TRANSITIVITY	Sensor	Process: Mental	Phenomenon
THEME	THEME (topical)	RHEME	

Table 5.11: Analysis of Clause 10

The understanding of the underlying meaning of the poster is far from complete, which I attempt to address in the following section.

5.5. INTERSEMIOSIS BETWEEN SEMIOTIC RESOURCES

At this point, it seems that neither an intrasemiotic analysis of the linguistic semiotic resource using SFG nor an intrasemiotic analysis of the visual semiotic resource can shed light on the overall message of the text. It is necessary at this juncture to conduct an

intersemiotic analysis of the text in order to derive conclusive and concordant meanings of the graphic design text.

Firstly, in the intrasemiotic analysis, it is recognised that the CVI is the Carrier of Possessive Attributes of pain and hurt. We do not know whether it is self-inflicted or externally inflicted by another Actor. However, this image of suffering is confirmed by the observation that the body is a zoomorphic Actor who participates in a non-transactional process—he offers and demands nothing but simply stares at you, asking for sympathy. Subsequently, SFG analyses have revealed that the graphic design text is essentially an event announcement poster, hence, in all likelihood, the talk is related to the pain and suffering of the Carrier. This Carrier can be assumed to be 'Stefan Sagmeister' since the name is featured in a prominent Cluster. The analysis of the clause 'Stefan Loves ?' further confirms that the body is indeed Stefan Sagmeister's. Combining disparate linguistic elements such as the enigmatic phrase 'Style = FART', 'Academy of Art', 'Printing', 'Paper' and 'Photo', it is deduced that the event has to do with the practice of graphic arts, hence, leading to the conclusion that Sagmeister is a graphic designer and he is facing pain in an enigmatic way which he cannot express and hence adopt another persona in order to convey his pain.

What has ensued is the revelation of a multisemiotic meaning (re)creation process in which intrasemiotic and SFG analyses and finally intersemiotic analysis is able to reveal the plausible meanings of the text. However it must be attested that this process usually takes place within a very short time frame for multisemiotically-literate readers. I have taken the approach to systematically quantify and qualify the steps and processes involved utilising an SF framework so as to highlight the complicity and possibilities of meaning (re)creation in multisemiotic texts.

After coming away from an intersemiotic analysis, although we are left with a more or less accurate meaning of the text, certain questions remain unanswered. What stands for AIGA? Who is Stefan Sagmeister? And we also want to confirm whether we are making the right conjectures and deductions as to what the title is and what the talk is really about. For these questions, I focus on the Contextual Planes of Situation and Culture in which my

knowledge of who the interactive participants are and various contextual information will be able to shed light on this enigmatic graphic design text.

5.6. UNDERSTANDING THROUGH CONTEXTS

Firstly, the main objective of the poster, as any other event posters, is to attract the audience to participate and attend the event. Secondly, the event poster was actually meant for internal circulation, in particular, for members of AIGA, which in fact, stands for *American Institute of Graphic Arts*. The audience is a specialised audience found within a specific context of culture and situation—a culture of graphical arts and a situation in which there will be a special talk for AIGA members. The carvings on his body are real. They are actually carved using a knife by his assistant (Hall, 2001).

The graphic design text is far from any ordinary event poster. Surprisingly, the title of the event is neither 'STEFAN SAGMEISter' nor 'Style = FART' as previously deduced based on the intersemiotic analyses. As observed, the words, 'STEFAN SAGMEISter' based on its compositional placement as well as its interpersonal focus can easily become the title of the event. Similarly, the oval Element highlighting the words, 'Style = FART' can also lead one to believe it is the title of the event. However, the poster is in fact, an 'advertisement for a talk hosted by the Detroit chapter of the AIGA in 1999' (Hall 2001: 191). 'STEFAN SAGMEISter' is actually the name of the designer and interestingly, 'Style = FART' is his motto: 'Sagmeister's aim was to specialize in music business graphics:… three copy-lines, 'Style = Fart,'… was a motto emphasizing ideas over form, a creed to which the studio would try to adhere (to)' (Hall, 2001: 116). The designer assumes that AIGA members know who he is and what his motto is and how they are relevant to the topic of his talk.

In all likelihood, from the perspective of AIGA members, this text is probably considered an overly presumptuous and sweeping gesture by the designer in question. Similarly, the general immediate response to these revelations is one of shock and disbelief: one is shocked at how the designer uses the platform to advertise himself blatantly and crudely at the expense of providing clear information to the actual event (which serves as the impetus for the event

poster in the first place). A letter to the editor for GRAPHIS magazine, a highly regarded graphic design journal, replies in response to the graphic design text: 'I am appalled at your inclusion of Stefan Sagmeister's work. The design community bears a certain responsibility. Our society is already on the road of depravity'.

At this juncture, one can stop analysing the text and label the text as an outlandish and crude performance which is totally uncalled for and in conclusion, its designer, a masochistic megalomaniac. However, the exercise will not be completed without bringing into relevance the previous observations gleaned from previous analyses. The question is whether are there substantial evidence to indicate whether the text is simply an egoistic display of self-propaganda or otherwise.

Since the initial reaction towards this text is one of disgust and disdain, I attempt to draw evidence from previous observations and analyses whether this deduction is valid.

5.6.1. A MEGALOMANIAC

O'Toole (1994: 181) says the following about artists: 'This Romantic myth of the bohemian artist is so deeply imprinted in our culture, that we feel quite resentful if an artist lives a normal, moderately prosperous, monogamous life outside the lunatic asylum'. Are we, in fact, as readers, expecting a designer to be half-crazed before we are willing to accept his designs and listen to him?

The most obvious evidence are the words, 'STEFAN SAGMEISter', which are compositionally and saliently distinguished within the Work. It occupies the centre of the Work and is situated at the top position of row B, and becomes the apex of the pyramidic structure. It is highlighted by a brighter tone than the rest of the Cluster or Elements. It is further enhanced by a patterned line which serves as an underlining typographical device. Its salience propel it to be the first Cluster in the reading path; it ranks first in the hierarchy of information. It appears that his name, 'SAGMEISter', is the *raison d'etre* for the talk, which, in fact, as revealed, it is about the designer's ordeal. It only shows how the designer believes

he should be the main focus in the graphic design text. This egoistic belief is visually conveyed through the full spread of his name across his shoulders in the most salient manner.

As noted earlier, the unique interpersonal Element of the letter 'G' in 'SAGMEISter' is carved with a different typeface from the rest of the letters. It is outlined and bolder than the rest. It is then not too presumptuous to think that 'G' in fact stands for 'God'. From an ontological viewpoint, he is in fact 'God' since he is the creator of the text, conceptualising the graphic design text in his mind and materialising it through technology. In a twisted logic, the creator of the text believes in placing his mark on the creation, thereby laying his rights and authority over the graphic design text, lest the reader or the text forgets who the creator is.

Secondly, the heavily mutilated stark-naked body is a modal feast to our senses, tempting us sensually with its bloodiness and nakedness, heightened by the accessory of pubic hair. The reader is shocked not simply because of its nakedness but the unreal material quality of the multiple red glowing scars on the body. It further shocks the reader because they are real and the reader can almost feel the pain of the model. However, the model is none other than the designer himself: 'Having experimented with cutting a small amount of text into his skin for the Whereishere project. Sagmeister reasoned that doing it again on a larger scale would be relatively painless' (Hall, 2001: 191). We are again inevitably drawn to the creator, the designer, the 'God' whom he claims to be. It is not anybody's body, but the designer's own body and to emphasise that, his name is inscribed on it very clearly.

It is previously assumed that the substitution of the format and the proportions afforded by the actual page with the human body actually celebrates the body as the perfect canvas for design. This celebration continued in the Clusters, through their emphasis on the natural body's innate symmetrical proportions. However, this celebration of the body is not just anybody's body but Sagmeister's body; he celebrates his own body and wants others to share in his celebration and adoration of his body as well. However, to use the body, naturally Sagmeister subscribed to its authority and inherent design quality – its sublime symmetry. However realizing that the strongest element ascribed to the body is its symmetry, he seeks to

attack this single point which happens to be its Archilles' heel. He deliberately adds Elements to destabilize the symmetry, thus, creating asymmetry instead.

Sagmeister desires to disrupt the naturally calm symmetry because he wants to reiterate the point that he is in control, and in this instance, not just of the graphic design text alone but his own body. Intentionally, he adds into the text Compositional and Interpersonal Elements such as the plaster on the left nipple, the upturned head and the raised left hand holding the box of plasters, causing distress to the sublime symmetry. Again, he desires to display his control over the situation, to stress that he is in control over his own body, which has inevitably become the focal point. Despite being motivated and determined by the body's natural structures and proportions, he is not dictated by it.

Another interpersonal Element that exacerbates this personalisation of the text is the very personal remark: 'STEFAN LOVES ?'. However, it is not evident from the text who is the recipient of this love. It is interesting that this is the only clause in the text which contains an actual infinite, 'loves'. But as we have seen in the SFL analysis, the Phenomenon is inexistent—there is nobody to love but himself. The clause becomes a declaration of love by the designer for himself. At this stage, we have adequate reasons to assume that the recipient of his love is intentionally not obvious for the reason that he does not want the reader to lose focus on him, the object *par excellence* above all. Indeed, we are even tempted to believe he is unable to love anybody but himself.

In conclusion, Sagmeister has utilised Interpersonal and Compositional features not to communicate the message or even has the intentions of doing so, but instead flagrantly used it to further purport that his very self: his name, body and personality should be adored and respected like God. With the evidence piling up, it seems that it is inevitable to conclude that the reader is actually an intruder into his moment of self-adoration in which he stands naked in front of mirror, adoring his own body with its immutable marks that he has purposefully inscribed on; thereby transforming himself into a modern Narcissus.

5.6.2. A MISUNDERSTOOD ARTIST

However, I also want to make a case for the designer as a misunderstood artist. Have we judged him unfairly? Are there any other observations in the analysis which we have not accounted for and are in his favour? Is it possible to interpret the text differently? These questions again can only be answered by re-examining our previous analyses.

Compositionally, it is argued previously that Sagmeister deliberately uses Elements to disrupt the already inherent sublime symmetry afforded by the natural body and thus displaying his intent of control. However, it is also observed that Compositionally, the sentences' baselines shift accordingly to the contours of the body. The text inscribed on the body subscribed to the limitations of the physical canvas. Instead of displaying control over his body, the designer actually negotiates with the body in his 'writing', thus revealing a leaning towards a mutability with the body. It expresses the perennial dichotomy between the body and the soul as well. The physical aspect of the human body is celebrated but the mental (soul) aspect is still in control. In conclusion, the Compositional structure in fact, conveys the message that the artist attempts to surpass his own physical limitations but discovers that he is unable to control his physicality entirely, and learns to come to terms with the dialectics of body and mind.

The argument that the artist is a publicity hound yearning to display himself may not be credible when we further consider that the salient quality of row A which contains the half-face. The face that is partially cropped, shrouded in darkness and camouflaged by the dark curtains symbolises a desire of the designer to hide his identity. If he is such a megalomaniac, will he still hide his face? By all means possible, he would have revealed his face in its full form in order that he gain instant recognition and hopefully, popularity. However, in this respect, he would rather remain anonymous, disallowing the reader to put a face onto the name and allowing the graphic design text to speak for itself, utilising its own acquired voice.

This voice is the voice of the zoomorphic quasi-face mentioned earlier. The cropped face indicates that the designer has shifted the potential of his own human gaze to the tragic quasi-face with the nipples acting as eyes and the navel as lips. It becomes a 'human' face

who is able to speak to the reader. Maintaining a direct gaze with the reader, its tragic expression is highly poignant when one considers the multiple wounds on 'his' face and the lone plaster below his left eye. Only at this moment do we begin to appreciate the significance of this conceptual personification of the body.

In fact, the event poster is meant to reflect 'the ordeals of the design profession' (Hall 2001: 191); as Sagmeister puts it himself, it shows 'the anxious periods, the fighting and the pain' (ibid.). The highly expressive quasi-face serves as a personification of these traumatic experiences. The designer is not at liberty to express his sadness in front of his clients who are also his audience because as a professional, he cannot allow emotions to enter into the picture. Neither is he at will to reveal his personal identity within the text which he has a vested interest in, and hence, the shrouded face. As an alternative, the designer uses an alternative vehicle to carry his emotions, and this vehicle is none other than his own body which is highly appropriate since it is a physical extension of himself. And this vehicle gains its potency in delivering the message when it becomes personified graphically into a face of tragic proportions.

The quasi-face holding the Element of the box of plasters draws us further into his tragedy. The box's vectorial direction is actually facing the audience in its upright position; the face seems to be begging the audience to assist him in pasting plasters on his wounds which it cannot see but only feel. The tragedy is further heightened when it appears that it can only manage to stick one plaster below its eye and for the rest of its wounds, it requires the reader's help. To exacerbate the calamity, there are insufficient plasters to go around for his multiple wounds and cuts—only 29 for its countless lacerations. It is also interesting to note that Sagmeister in the actual execution of the graphic design text, required external assistance to inscribe the letterings on his body, signifying that the pain and agony is caused not from within but from without, and in an ironic twist, the relief is also only possible with external assistance. The egoistic persona on the surface is in fact, a pathetic persona who is deeply afflicted and is dependent on the mercies of others to rescue him from his plight.

Finally, the motivations behind the text surface: in order to capture 'the ordeals of the design profession', Sagmeister cannot put his own face on it because it is impossible for him to be the iconic figure for designers and represent every designer in AIGA, instead he employs his body as a vehicle in an attempt to convey the message of the pain and agony of designers. The body is appropriate because it is neutral, devoid of personality—an extension of the designer and the perfect vehicle to deliver the message. It is not a simple poster to invite participants to an event, neither it is an egoistic display of self-determination; instead it is a symbol of pain and ordeal for designers without the individual persona.

How then do one come to terms with the personal Elements he has liberally inserted into the text – his name, his motto and his declaration of self-love? In fact, with the understanding that the body has symbolic value, the personal remarks can be explained. Building on this symbolic icon of the body, Sagmeister cleverly extends the metaphor of vehicle by transforming the designer into the Aristotelian concept of the 'tragic hero'. In its essence, a Greek tragic hero is the protagonist who falls because of his harmatia i.e. tragic flaw (which in most cases is *hubris*, that is, excessive self-pride) and the fall provides the audience an emotional release called 'catharsis'. Designers usually consider themselves not as artisans or mere craftsmen but as artists who conceptualise and create the texts. Like all artists, all designers desire their names to be credited for in the graphic design texts. This explains the personal marks on the body: Sagmeister wants to put his personal mark on the graphic design text. It must be stressed this is entirely different from being a megalomaniac who is 'someone who believes they are extremely important or powerful and tries to control other people's lives' (Longman 1995: 888). Sagmeister does not believe he is the 'god' of the text nor does he wish to control the text, instead he simply wants to be recognised for his contributions to the text as well as to be granted the respect for his creations. Hall (2001: 191) writes about the significance of the poster:

> 'The poster… signalled a turning point for the design profession, away from aspirations of digital perfection toward a higher appreciation for a designer's personal mark. Twelve years of computer-driven design had initiated a backlash in

favor of the tactile and hand-hewn – anything that showed physical evidence of a creator and evoked an equally physical response, even repulsion'.

Because of his *harmatia*, the tragic 'designer-hero' desires to display his skills and be known and respected for his skills but the commercial reality of the design world is often unforgiving, placing pragmatic objectives above artistic excellence. This creates a dilemma for the designer: he is unable to come to terms with the artistic demands of himself and the commercial demands of the client and the environment. He then resigned to the fate of the designer, allowing the external forces to inflict pain on his body. Hence, the poster succinctly captures this image of the tragic designer-hero.

Sagmeister understands this tragic designer-hero persona well, having experienced it personally as a designer. The following is an account of one of his tragic experiences:

> 'The worst designs to come out of the Sagmeister studio were arguably its CD-ROM packaging schemes for a collection of computer games from Viacom. To beef up their shelf presence, the CD-ROMs were to be double-packaged inside elaborate 'cereal boxes' – much as early audio CDs were put in useless cardboard 'longboxes' to make them appear as substantial as the 12-inch vinyl records they replaced. Sagmeister took on the project despite deep misgivings. 'I hate deceptive packaging,' he says. 'And I'm not into computer games, particularly not shoot 'em up games.' Sagmeister's next wrong move was to present several alternative designs. One commonly held law of graphic design is that, much as the laser printer always jams when the user is late for a meeting, a client always picks the designer's least favorite concept. In this case it was a spectacularly overblown scheme using a five-way lenticular picture of an explosion. Bad wasn't quite bad enough, however, and a series of alterations followed, to add a touch more clutter. 'Viacom is a huge corporation and behaved like one, with many changes coming out of meetings that you were not part of,' says Sagmeister. 'The back cover was redesigned probably a dozen times' (Hall, 2001: 148-9).

Sagmeister experiences the ordeals personally and realises in order to convey the double message of tragedy and heroism effectively, he cannot simply use a simplistic icon, for example, a handsome or beautiful designer-looking model grabbing his hair under extreme pressure. Instead, he chose to use a vehicle that is personal to all designers – the human body. The final image is a highly mutilated body signifying the tragic designer-hero who is being afflicted but yet helpless in his own cul de sac, requiring the assistance of the audience. For the readers, the shock and reaction to the stark nakedness and grotesque brutality provides a

carthatic release—we escape from our preconceived notions about the designer, causing us to rethink and even extend our sympathy and help for the designer. For the designers, the poster reaches out to them and understands the ordeal they are going through, and hence they will attend the lecture and discover how to cope with the pain that is common to all designers.

5.7. CONCLUSION

After presenting the case from both sides, the reader needs to draw his own conclusion as to whether Sagmeister is a megalomaniac or a misunderstood artist based on the discussions.

As a result, I have shown how to apply the SF framework onto an authentic graphic design texts to obtain comprehensive analyses which is able to reveal the intrasemiotic as well as intersemiotic meanings which arise from the interaction between the visual and linguistic semiotic resources. In order to elucidate the final message and the various readings, I have chosen to employ certain tools from the toolkit, IMM2.

To further illustrate the use of the toolkit, I will employ the system of 'Intertextuality' (Baldry and Thibault, 2006: 55) to shed light on intertexual relations of the graphic design text. The text is intertextually linked to another earlier inter-text created in 1987 by April Greiman (see Figure 5.5). Similar to Sagmeister, Greiman as the designer employs the image of her naked body as a canvas. However, unlike Sagmeister who physically inscribed on his body, Greiman superimposes digitised graphics onto her body to depict how technology has transformed the role of the designer. In this consideration, these two texts are 'Inter-texts' in the usage of the designer's personal body as the main artifact for text. The graphic design text in question is intertexually related to other 'Co-texts' (texts which bears similar characteristics) which Sagmeister has created for his other talks using the persona of himself (see Figures 5.6).

CHAPTER 6: LIMITATIONS

In the analysis of the graphic design text, I have shown how the SF approach can provide a viable SF framework in terms of a general toolkit in order to reveal intersemiotic and intrasemiotic processes between two disparate semiotic resources. However, there are certain limitations to my SF approach.

Firstly, I have not entirely solved the issue of employing a logocentric and typological semiotic resource (that is, the linguistic semiotic resource) to analyse a multisemiotic text which contains both typological and topological semiotic resources. The employment of graphics, tables and diagrams may help to elucidate the explanations as well as the analyses, however, the SF analysis still remains a largely logocentric approach with the amount of words outweighing the amount of visuals. In the future, this may be solved with the use of advanced SF tools which can both integrate both semiotic resources (and others) to provide a more comprehensive and balanced view on the multisemiotic text.

Secondly, although the toolkit in the form of IMM2 serves as a general framework in which other tools (such as systems and mechanisms) can be included, it still requires the designer-critic to acquire a large amount of SF knowledge in terms of SFG and SFT. The terminology used are specific and as attested earlier, at times, confusing. The philosophical underpinnings based on Halliday (for example, social semiotics, metafunctions and stratification) are concepts which require much deliberation and understanding. O'Toole (1994: 31) attests to this fact:

> 'Our analyses, descriptions and evaluations are to a considerable degree controlled by what is there in the visual text of the painting. Our analysis will depend to a certain degree of technical knowledge and practice at analysing paintings; our description will depend on a certain amount of prior knowledge – historical, psychological, and philosophical – and our evaluation will be influenced by our aesthetic training and the sheer amount of practice we have had at relating Works of art to certain established norms'.

Lastly, a flexible and general toolkit can become a 'jack of all trades' but 'master of none' as it constantly subsumes various systems and theories into its fold. The institution of guidelines to restrict the entry of systems which do not fit into the SF rubric may be a

solution. Yet, this solution opposes the objective of a multi-purpose toolkit—to be able to subsume new systems and semiotic resources which may develop in later years due to advancements in technology. This result in a dilemma of having too little and having too much. What is required is then a sensitivity to the various issues pertaining to SF as well as multisemiotic discourse analysis and to adopt a balanced approach to enquiry and analysis

Due to limitations of space, this thesis can only propose the SF approach as a viable approach for the analysis of multisemiotic texts, in the form of graphic design texts with the example of a graphic design text. Further research is required especially in a pedagogical environment to reveal whether the SF approach and its general SF toolkit can be easily acquired by both students and practitioners and is, indeed, can be an 'exotropic' form of analysis.

In the end, the proposed SF approach only hopes to encapsulate the objective as expressed by Otto Neurath, creator of international picture signs – to create for 'the graphic designer of the next millennium, the language worker… tools for unearthing new questions and constructing new answers' (Lupton and Miller, 1999: 44).

END OF THESIS

BIBLIOGRAPHY

Albrecht, D. (2000) *Design Culture Now*. New York: Princeton Architectural Press.

Alias, S. (2004) 'A semiotic study of Singapore's Orchard Road and Marriott Hotel'. In O'Halloran, K. L. (ed.), *Multimodal Discourse Analysis*. London: Continuum.

Allen, R. et al. (1998) *The Chambers Dictionary*. Edinburgh: Chambers.

Arnheim, R. (1969) *Visual Thinking*. Berkeley and Los Angeles: University of California Press.

Arnheim, R.(1974) *Art and Visual Perception.* Berkeley: University of California Press.

Arnheim, R.(1988) *The Power of the Centre: A Study of Composition in the Visual Arts*. Berkeley: University of California Press.

Arnheim, R.(1992) *To the Rescue of Art: Twenty-Six Essays.* Berkeley and Los Angeles: University of California Press.

Ashwin, C. (1983) *History of Graphic Design and Communication: a Source Book.* London: Pembridge Press.

Bakhtin, M. M. (1986) 'The problem of speech genres and text types'. In Emerson, C. and Holquist, M. (eds.), *Speech Genres and Other Late Essays*. Austin: University of Texas Press.

Baldry, A. P. and Beltrami, M. (2005) 'The MCA Project: concepts and tools in multimodal corpus linguistics'. In Maj Asplund Carlsson, Anne Lovland and Gun Malmgren (eds.), *Multimodality: Text, Culture and Use. Proceedings of the Second International Conference on Multimodality*. Kristiansand: Agder University College/ Norwegian Academic Press, pp. 79-108.

Baldry, A. P. and Thibault, P. J. (2006) *Multimodal Transcription and Text Analysis: a multimedia toolkit and coursebook with associated on-line course*. London: Equinox.

Barnard, M. (2005) *Graphic Design as Communication*. New York : Routledge

Barry, A. M. S. (1997) *Visual Intelligence: Perception, Image and Manipulation in Visual Communication.* New York: State University of New York Press.

Barthes, R. (1964/67) *Elements of Semiology*. London: Cape.

Barthes, R. (1977) *Image, Music, Text*. New York: The Noonday Press.

Barthes, R. (1985) *The Responsibility of Forms*. Oxford: Basil Blackwell.

Benacerraf, P. (2001) 'Mathematical truth'. In Jacquette, D. (ed.), *Philosophy of Mathematics: an Anthology*. Malden: Blackwell.

Bierut, M.; Drenttel, W.; Heller, S.; Holland, D. K. (eds.) (1994) *Looking Closer: Critical Writings on Graphic Design*. New York: Allworth Press.

Bierut, M.; Hefland, J.; Heller, S.; Poynor, R. (eds.) (1999) *Looking Closer 3: Critical Writings on Graphic Design*. New York: Allworth Press.

Bierut, M.; Drenttel, W.; Heller, S. (eds.) (2002) *Looking Closer 4: Critical Writings on Graphic Design*. New York: Allworth Press.

Blackwell, L. (2000) *The End of Print : the Grafik Design of David Carson.* London: Laurence King.

Bohle, R. (1990) *Publication Design for Editors*. New Jersey: Prentice-Hall.

Bringhurst, R. (2002) *The Elements of Typographic Style*. Vancouver: Hartley and Marks.

Cheong, Y. Y. (1999) *Construing Meaning in Multi-semiotic Texts – a Systemic Functional Linguistics Perspective*, MA thesis. Singapore: National University of Singapore.

Cheong, Y. Y. (2004) 'The construal of Ideational meaning in print advertisements'. In O'Halloran, K. L. (ed.), *Multimodal Discourse Analysis*. London: Continuum.

Ciochetto, L. (2003) 'Toilet signage as effective communication'. In *Visible Language* vol 37.2, pp. 208-221.

Cobley, P. (ed.) (2001) *The Routledge Companion to Semiotics and Linguistics*. London: Routledge.

Cook, G. (1992)*The Discourse of Advertising*. New York : Routledge

Cook, G. (2001)*The Discourse of Advertising, 2nd Edition*. New York : Routledge

Crow, D. (2003) *Visible Signs*. Switzerland: AVA Publishing SA.

Dilnot, C. (1984) 'The state of design history'. In *Design Issues*, Spring 1984.

Dondis, A. D. (1973) *A Primer of Visual Literacy*. Massachusetts: The MIT Press.

Eco, U. (1976) *A Theory of Semiotics*. Bloomington: Indiana University Press

Eggins, S. (1994) *An Introduction to Systemic Functional Linguistics.* London: Pinter Publishers.

Eggins, S. (2004) *An Introduction to Systemic Functional Linguistics*. 2nd ed. New York: Continuum.

Elam, K. (2004) *Grid Systems*. New York: Princeton Architectural Press.

Esslin, M. (1987) *The Field of Drama : how the signs of drama create meaning on stage and screen.* London: Methuen Drama.

Fiell, C. and Fiell, P. (2001) *Design of the 20th Century*. New York: Taschen.

Firth, J. R. (1957) 'Personality in language and society'. In Firth, J. R., *Papers in Linguistics 1934-1951*. London and Oxford: Oxford University Press.

Fiske, J. (1996) 'British cultural studies and television'. In Storey, J. (ed.), *What is Cultural Studies?: a Reader*. New York: Arnold.

Frank, T. (2000) *One Market Under God: Extreme Capitalism, Market Populism, and the End of Economic Democracy*. New York: Doubleday.

Gibson, J. J. (1986) *The Ecological Approach to Visual Perception*. Hillsdale, NJ and London: Lawerence Erlbaum.

Goffman, E. (1979) *Gender Advertisements*. New York: Harper & Row.

Goldman, R. (1992) *Reading Ads Socially*. London: Routledge.

Guo, L. (2004) 'Multimodality in a biology textbook', In O'Halloran, K. L. (ed.), *Multimodal Discourse Analysis*. London: Continuum.

Hall, P. (2001) *Sagmeister: Made You Look.* London: Booth-Clibborn Editions.

Halliday, M.A.K. (1978) *Language as Social Semiotic*. London: Edward Arnold.

Halliday, M.A.K. (1985) *An Introduction to Functional Grammar*. London: Edward Arnold.

Halliday, M.A.K. & R. Hasan, (1985) *Language, Context and Text: Aspects of language in a social-semiotic perspective*. Oxford: Oxford University Press.

Halliday, M.A.K. (1994) *An Introduction to Functional Grammar*. 2nd ed. London: Edward Arnold.

Halliday, M.A.K. (2004) *An Introduction to Functional Grammar*. 3rd ed. Revised by C. M. I. M. Matthiessen. London: Edward Arnold.

Hasan, R. (1984) 'Coherence and cohesive harmony'. In J. Flood (ed.), *Understanding Reading Comprehension: Cognition, Language and the Structure of Prose*. Newark, DE: International Reading Association, pp. 181-219.

Hasan, R. (1985) 'The structure of a text'. In M. A. K. Halliday and R. Hasan (eds.), *Language, Context, and Text: Aspects of Language in a Social-Semiotic Perspective.* Geelong, Victoria: Deaking University Press, pp. 70-96.

Hasan, R. (1993) 'Context for meaning'. In James E. Alatis (ed.), *Language, Communication and Social Meaning: Georgetown University Round Table on Languages and Linguistics 1992*. Washington. D.C.: Georgetown University Press, 79-103.

Hasan, R. (1996) *Ways of Saying, Ways of Meaning: Selected papers of Ruqaiya Hasan*. (eds. C. Cloran, D. Butt and G. Williams) London: Cassell.

Hasan, R. (1997) 'Society, Language, and the Mind: The meta-dialogism of Basil Bernstein's theory'. In F. Christie (ed.), *Pedagogy and the Shaping of Consciousness: Linguistic and social processes*. London: Cassell.

Hasan, R. (1999) 'Society, language and the mind'. In Christie, F., *Pedagogy and the Shaping of Consciousness*. London: Continuum.

Heller, S. and Ballance, G. (eds.) (2001) *Graphic Design History*. New York: Allworth Press.

Holland, D. K. (ed.) (2001) *Design Issues : how Graphic Design Informs Society***.** New York: Allworth Press.

Hollis, R. (1994) *Graphic Design: A Concise History*. London: Thames and Hudson.

Iedema, R. (2003) 'Multimodality, resemiotization: extending the analysis of discourse as multi-semiotic practice'. In *Visual Communication 2(1)*, pp. 29-57.

Iedema, R. (2001) 'Resemiotization'. In *Semiotica 137-1/4(1)*, pp. 23-39.

Irwin, W. (ed.) (2002) *The Death and Resurrection of the Author?*. Westport: Greenwood Press.

Jakobson, R. (1971) *Fundamentals of language.* The Hague: Mouton.   .

Kalman, et al. (1994) 'Good history/ bad history'. In Bierut, M.; Drenttel, W.; Heller, S.; Holland, D. K. (eds.), *Looking Closer: Critical Writings on Graphic Design*. New York: Allworth Press.

Kepes, G. (1951) *Language of Vision*. Chicago: Theobald.

Klein, N. (1999) *No Logo: Taking Aim at the Brand Bullies*. New York: Picador.

Kok, A. K. C. (2004) 'Multisemiotic mediation in hypertext'. In O'Halloran, K. L. (ed.), *Multimodal Discourse Analysis*. London: Continuum.

Kress, G. (2003) *Literacy in the New Age*. London: Routledge.

Kress, G and van Leeuwen, T. (1996) *Reading Images: The Grammar of Visual Design*. London: Routledge.

Kress, G and van Leeuwen, T. (2001) *Multimodal Discourse: The Modes and Media of Contemporary Communication Discourse*. London: Arnold.

Kress, G and van Leeuwen, T. (2002) 'Colour as a semiotic mode: notes for a grammar of colour'. In *Visual Communication,*. 1 (3), pp. 343-368.

Kress, G and van Leeuwen, T. (2006) *Reading Images: The Grammar of Visual Design, Second Edition*. London: Routledge.

Lemke, J. L. (1985) 'Ideology, intertextuality, and the notion of register'. In Benson, J. D. and Greaves, W. S. (eds.), *Systemic Perspectives on Discourse, Volume 1: Selected theoretical papers from the 9th International Systemic Workshop*. Norwood NJ: Abbex.

Lemke, J. L. (1995) "Intertextuality and Text Semantics", in Peter Fries and Michael Gregory (eds.), *Discourse in Society: Systemic functional perspectives*. Vol. L in the series Advances in Discourse, Norwood, New Jersey: Ablex Publishing Corporation,. 85-114.

Lemke, J. L. (1998) 'Multiplying meaning: visual and verbal semiotics in scientific text'. In J. R. Martin and R. Veel (eds), *Reading Science: Critical and Functional Perspectives on Discourses of Science*. London: Routledge, pp. 87-113.

Lévi-Strauss, C. (1997) 'The culinary triangle'. In Counihan, C. and Van Esterik, P. (eds.), *Food and Culture : a Reader*. New York: Routledge.

Levine, P. and Scollon, R. (eds.) (2004) *Discourse & Technology: Multimodal Discourse Analysis.* Washington: Georgetown University Press.

Lim, F. V. (2002) *The Analysis of Language and Visual Images – an Integrative Multisemiotic Approach.* MA thesis. Singapore: National University of Singapore.

Lim, F. V. (2004) 'Developing an integrative multisemiotic model'. In O'Halloran, K. L. (ed.), *Multimodal Discourse Analysis*. London: Continuum.

Lupton, E. and Miller, A. (1996) *Design Writing Research.* New York: Kiosk.

Malinowski, B. (1923) 'Supplement I: The problem of meaning in primitive languages'. In Odgen, C. K. and Richards, I. V. (eds), *The Meaning of Meaning*. New York: Harcourt.

Martin, J. R. (1992) *English Text: System and Structure.* Amsterdam: John Benjamins.

Martin, J. R. (2001) 'Fair trade: negotiating meaning in multimodal texts'. In Patrick, C. (ed.), *The Semiotics of Writing: Transdiciplinary Perspectives on the Technology of Writing*. Bologna: Brepols.

Martin, J. R. and Rose, D. (2003) *Working with Discourse: Meaning Beyond the Clause.* London: Continuum.

Martinec, R. and Salway, A. (2005) 'A system for image-text relations in new (and old) media'. In *Visual Communication 4(3)*, pp. 337-371.

Mccloud, S. (1993) *Understanding Comics : the Invisible Art***.** New York: HarperPerennial.

Meggs, P. (1998) *A History of Graphic Design, Third Edition.* New York: John Wiley

Metz, C. (1992) 'From film language: some points in the semiotics of cinema'. In Mast, G.; Cohen, M.; Braudy, L. (eds.), *Film Theory and Criticism : introductory readings*. New York: Oxford University Press.

Moholy-Nagy. L. (1947) *Vision in Motion.* Chicaogo:Theobald

Monbiot, G. (2001) *Captive State: The Corporate Takeover of Britain.* London: Pan Books.

Mooth, B. (2006) "Pret a papier.", in *How, June 2006*. 88-93.

Mukarovsky, J. (1997) 'Aesthetic function, norm and value as social facts'. In Newton, K. M. (ed.), *Twentieth-century Literary Theory: a Reader***.** New York: St. Martin's.

Muller-Brockmann, J. (1996) *Grid systems in design*. Zurich: Verlag Niggl AG.

Noble, I. and Bestley, R. (2005) *Visual Research: an Introduction to Research Methodologies in Graphic Design.* Switzerland: AVA Publishing.

O'Halloran, K. L. (1999a) 'Interdependence, interaction and metaphor in multisemiotic texts.", in *Social Semiotics, 9(3)*. 317-354.

O'Halloran, K. L. (1999b) 'Towards a systemic functional analysis of multisemiotic mathematics texts'. In *Semiotica, 124-1/2*, pp. 1-29.

O'Halloran, K. L. (2000) 'Classroom discourse in mathematics as a multisemiotic discourse'. In M.Anderson, A. Saenz-Ludlow, S.Zellweger and V.V. Cifarelli (eds.), *Grammatical Metaphor: Views from Systemic Functional Linguistics*. Amsterdam: John Benjamins, pp. 337-365.

O'Halloran, K. L. (ed.) (2004) *Multimodal Discourse Analysis.* London: Continuum.

O'Halloran, K. L. (2005) *Mathematical Discourse: Language, Symbolism and Visual Images*. London: Continuum.

O'Halloran, K. L.. (in press) 'Systemic functional-multimodal discourse analysis (SF-MDA): constructing ideational meaning using language and visual imagery'. In *Visual Communication*.

O'Halloran, K. L.. (forthcoming) 'Systemic functional multimodal discourse analysis (SF-MDA) Approach to Mathematics, Grammar and Literacy'. In McCabe, A., O'Donnell, M., Whittaker, L. (eds.), *Advances in Language and Education.* London: Continuum

O'Toole, M. (1994) *The Language of Displayed Art*. London: Leicester University Press.

O'Toole, M (2004) 'Opera Ludentes: the Sydney Opera House at work and play'. In O'Halloran, K. L. (ed.), *Multimodal Discourse Analysis*. London: Continuum.

Pang, A. K. M. (2004) 'Making history in from colony to nation: a multimodal analysis of a museum exhibition in Singapore'. In O'Halloran, K. L. (ed.), *Multimodal Discourse Analysis*. London: Continuum.

Peterson, B. L. (2003) *Design Basics for Creative Results*. Ohio: F&W Publications.

Poynor, R. (2002) 'The time for being against'. In Bierut, M.; Drenttel, W.; Heller, S. (eds.), *Looking Closer 4: Critical Writings on Graphic Design*. New York: Allworth Press.

Ramachandran, V. S. and Hubbard, E. M. (2005) 'Hearing colours, tasting shapes'. In *Scientific American, 2005*, pp. 17-23.

Royce, T. (1998) 'Synergy on the page: exploring intersemiotic complementarity in page-based multimodal text'. In *JASFL Occasional Papers No.1*. Tokyo: Japan Association of Systemic Functional Linguistics (JASFL).

Royce, T. (1999) *Visual-Verbal Intersemiotic Complementarity in the Economist Magazine*. PhD thesis. Reading: University of Reading.

Royce, T. (2002) 'Multimodality in the TESOL Classroom: Exploring Visual-Verbal Synergy'. In *TESOL Quarterly, Vol.36, No. 2, Summer 2000*, pp. 191-205.

Sadokierski, Z. (2006) 'A designer by any other name'. In *Visual Communication 5(1)*.

Saussure, F. D. (1959) *Course in General Linguistics*. New York: McGraw-Hill Paperbacks.

Sidiropoulou, C. (2006) 'Book review of O'Halloran (ed.) Multimodal Discourse Analysis: Systemic Functional Perspectives'. In *Visual Communication 5(1)*, pp. 121-126

Swanson, G. (ed.) (2000) *Graphic Design & Reading: Explorations of an Uneasy Relationship.* New York: Allworth Press.

Thibault, P. J. (1986) 'Thematic system analysis and the construction of knowledge and belief in discourse: the headlines in two Italian newspaper texts'. In *Text, Discourse, and Context: A social semiotic perspective.* Victoria Univeristy, Toronto: Monographs, Working Papers and Prepublications of the Toronto Semiotic Circle, Vo. 3, pp. 44-91.

Thibault, P. J. (1990) 'Questions of genre and intertextuality in some Australian television advertisements'. In Favretti, R. R. (ed.), *The Televised Text*. Bologna: Patron, pp. 89-131.

Toolan, M. J. (1998) *Language in Literature : an Introduction to Stylistics.* New York: St. Martin's Press.

Tripp. D. (1986) *Children and Television: a Semiotic Approach.* Cambridge, U.K.: Polity Press

Tudor, A. (1974) *Image and Influence: Studies in the Sociology of Film*. London: Allen & Unwin.

Tufte, E. R. (1983) *The Visual Display of Quantitative Information*. Cheshire, Connecticut: Graphics Press.

Tufte, E. R. (1990) *Envisioning Information*. Cheshire, Connecticut: Graphics Press.

Turchin, V. (1999) *Metalanguage* [online]. Principia Cybernetica. Available from http://pespmc1.vub.ac.be/http://%E2%80%9E%09%E2%80%A6/METALARE.html. [Accessed on 02 June 2006].

Uspensky, B. (1973) *A Poetics of Composition*. Berkeley and Los Angeles: University of California Press.

Van Leeuwen, T. (2005) 'Typographic meaning'. In *Visual Communication 4(2)*, pp. 138-142.

Van Leeuwen, T. and Jewitt, Carey (eds.) (2001) *Handbook of Visual Analysis.* London: Sage.

Wallschlaeger, C. and Basic-Snyder, C., U. (1992) *Basic Visual Concepts and Principles for Artists, Architects, and Designers*. Boston: McGraw Hill

White, P. R. R. (1999) *An Introductory Tour Through Appraisal Theory*. English Language Research, Department of English, University of Birmingham.

White, A. (2002) *The Elements of Graphic Design.* New York: Allworth Press.

Williamson, J. (1996) 'Decoding advertisements'. In Marris, P. and Thornham, S. (eds.), *Media Studies: a Reader*. Edinburgh: Edinburgh University Press.

Wollen, P. (1992) 'From signs and meaning in the cinema: the auteur theory'. In Mast, G.; Cohen, M.; Braudy, L. (eds.), *Film Theory and Criticism: introductory readings.* New York: Oxford University Press.

Zelanski, P. and Fisher, M. P. (1996) *Design Principles and Problems, Second Edition.* Belmont: Thomson Learning.