Multimodal Epistemologies

Towards an Integrated Framework

Edited by
Arianna Maiorani and
Christine Christie

Routledge

Multimodal Epistemologies

This volume develops a new multimodal semiotic approach to the study of communication, examining how multimodal discourse is construed transmedially and interculturally and how new technologies and cultural stances inform communicative contexts across the world.

It contributes to current theoretical debates in the disciplines of semiotics, linguistics, multimodality and pragmatics, as well as those aspects of pedagogy and film studies that engage with the notions of text and narrative by addressing questions such as: How do we study multimedia communication? How do we incorporate the impact of new media technologies into the study of Linguistics, Semiotics and Pragmatics? How do we construe culture in modern communication? How useful are the current multidisciplinary approaches to multimodal communication?

Through the analysis of specific case studies that are developed within diverse academic disciplines and which draw on a range of theoretical frameworks, the goal of this book is to provide a basis for an overarching framework that can be applied by scholars and students with different academic and cultural backgrounds.

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Routledge Studies in Multimodality

Edited by Kay L. O'Halloran, *National University of Singapore*

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I dedicate this book to my mother Giulia Titta and my father Mauro Maiorani and their unforgettable *Il Cigno.*

—Arianna Maiorani

For Gerry & Adam: with love and gratitude.

—Christine Christie

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Introduction

Scholars and students are increasingly aware of the complex and multimodal nature of contemporary discourse in all fields. Recent years have seen the rapid development of new media communication and technology, as well as a huge growth in entertainment markets involving the production and sale of interactive games and learning tools. There has also been an expansion in the numbers—and kinds—of users of these products, as well as in the range of cultures and contexts in which these products are read and interpreted. Such developments have challenged the relevance and scope of the epistemologies that have until now defined and informed the study of communication and discourse. The creation and adoption of a new, comprehensive, more flexible and adaptable epistemology is therefore a major challenge for all those who work in and with discourse analysis and communication studies.

This book integrates a range of theoretical approaches and methods of analysis that stem from different disciplines but which share a mutual interest in analysing and understanding the development of different modes of communication and their relation to society, while also engaging with the impact of these different modes on social practices. The integrated approach to multimodality offered by this book aims to meet the needs of the academic community as new communicative media and practices expand and reorganise research, teaching and learning practices, for academics and students as well. The multimodal epistemology proposed by this book is designed as a way of approaching, elaborating on and teaching research practices that focus on communication in its complex phenomenology. The framework synthesises approaches informed by scholarship in SFL and pragmatics to investigate the relationship between communication as a multimodal meaning making process and practice.

The essays collected in this book offer examples of how the term *multimodality* can be used to designate a theoretical approach as well as a multifaceted scholarly practice that aims at capturing the nature of Multimodal Epistemology through a tripartite ontology. The examples in this book are not simply case studies: they are illustrations of a multimodal epistemology based on three ways of interpreting multimodality as an approach to

knowledge: (1) multimodality as a semiotic perspective; (2) multimodality as a tool for cultural research; and (3) multimodality as a way to analyse contemporary narrative processes. All three interpretations focus on complex forms of communication that involve meaning making processes impacted by the continuous evolution of media technologies. In this way, we also wish to contribute to theoretical frameworks that inform the study of new media communication and offer a useful tool to both researchers and students in various fields of human sciences. The range of papers in this book approaches multimodal discourse from diverse perspectives with integrated analytical methodologies, but they share a focus on communication as an ever evolving process encoding cultural and social contexts through a complex interplay of meaning making practices.

Work in multimodality has already extended the notion of text by elaborating frames of analysis to systematise the relationship between semiotic realisations of various kinds and the social and cultural context in and by which meanings are produced (van Leeuwen 1999, 2005, 2011; Kress & van Leeuwen 2001, 2006). Multimodality is usually described as the field of discourse analysis that studies the creation, development and functioning of texts realised through the use of more than one semiotic system, as well as a theoretical approach for understanding how communication unfolds through the interplay of diverse modalities in the process of social semiosis. As Kress (2010) claims, much of the work in multimodality stems from Systemic Functional Linguistics (SFL) (Halliday & Matthiessen 2004; Eggins 2004).

Research in SFL has, in recent years, extended the functional approach to language to investigate the interplay of the diverse semiotic systems that are typically produced by and exchanged in new media communication. The rapid evolution of technology in this field has challenged the traditional methods of textual analysis, to the point that meaning is now being explored in relation to visual semiotics, sound, colour, architecture, etc. There has already been a range of studies that have applied SFL in the analysis of multimodal texts. For example, O'Halloran (2004), Maiorani (2009a) and Stenglin, Hood & Dreyfus (2010) focus on multimodal communication and environments, posing text as a social practice that develops in response to its context. Gee (2003), Martinec & van Leeuwen (2007), Bateman (2008), Dennis & De Fleur (2009), Maiorani (2009b, 2010) and Norris (2011) have analysed websites and games. Ventola, Cassily & Kaltenbacher (2004) and Jones & Ventola (2008) have analysed museums and cultural events and cultural phenomena as multimodal discourses. Bublitz & Hoffmann (2010), Bateman & Schmidt (2011) and Maiorani (2011) have focused on films. Page (2009) and Gibbons (2010) have addressed narratology, and O'Halloran & Smith (2011) is an example of recent research which investigates the possibility of designing new theoretical frameworks for multimodality as a discipline through analytical case studies.

These works have shown the complexity of the interplay that generates meanings and meaning reception in human society. They have also shown that the analysis of multimodal discourse needs to be cross-disciplinary, suggesting the need for a critical and epistemological (not only academic) attitude that continuously elicits and generates research and teaching methods capable of approaching the ever developing means and ways of communication. For this reason, this book is designed to address ways of developing a cross-disciplinary multimodal epistemology that is capable of addressing recent research in the field of communication inside and outside those aspects that are more or less directly informed by the original SFL theory and work.

The need for a greater interaction between disciplines in the development of multimodal discourse analysis has already been recognised. Forceville (2009: 1236), for example, has argued that:

> One problem besetting the theorization of multimodal discourse is that most senior scholars entering this field have been monomodally educated: they are linguists, or musicologists, or art historians. Inevitably, they are thereby biased by their original field of study, and limited by their restricted knowledge of other disciplines.

Although, therefore, SFL has so far led the way in the development of multimodal analysis, this in itself is potentially limiting. Forceville argues that one of the problems with the strongly Hallidayan perspective that has informed much multimodal analysis is that it leads to a focus on the text itself, and tends to generate descriptive accounts. As he goes on to point out such descriptions seldom result in 'non-trivial explanations why the texts convey what they supposedly do convey, let alone any formulation of—however tentative—patterns or generalisations' (Forceville 2009: 1236). While he acknowledges the usefulness of the bottom-up orientation of this type of analysis, Forceville (2009: 1236) argues for a need to complement the approach with 'well functioning top-down conceptualizations'.

We take up Forceville's call to build on the insights that different fields of scholarship have already brought to the analysis of discourse within specific modalities for the analysis of multimodal discourse. In addressing that call, the contributions to this collection critically engage with and build on well-established analytical frameworks in order to demonstrate the potential for applying existing conceptual tools in ways that transcend the constraints of their original epistemology, as well as developing new tools for analysis. Each of the case studies presented in this volume addresses the need for a broader framework for understanding current cultural and intercultural semiotic processes.

The papers contained in the book were selected from the many papers presented at the conference "Analysing Multimodal Discourse: SFL Meets Pragmatics" held at Loughborough University in the United Kingdom on

1–3 September 2011. As organisers of the conference we were concerned to provide a forum for exploring the potential for using insights from different disciplines to create new methodologies and new approaches to the analysis of multimodal discourse. Our hope was that the conference would bring into view common interests within the diversity that would ultimately lead to the formation of a new type of multimodal epistemology. The stated aims of the conference were to enhance the understanding of multimodal discourse; to investigate ways of addressing the contextual information that participants in multimodal discourse draw on; to foster theoretically robust methodological innovation, and ultimately to create an integrated field of research capable of addressing new media communication studies. The wide range of research fields that the papers dealt with and the innovative perspectives that were adopted by the presenters indicated exceptional vitality and diversity in the analysis of multimodal discourse, and offered evidence of areas of common ground and consensus. The papers selected for this volume present the research work and proposals of well-known, internationally established scholars as well as young researchers. In selecting the papers we have focused on the innovative quality of their theoretical stance and the originality of their integrated methodological approach.

The book is divided into three main parts each dealing with a multimodal approach to knowledge and focusing on aspects of contemporary communication processes which were outlined earlier, namely multimodality as a semiotic perspective, multimodality as a tool for cultural research and multimodality as a way to analyse contemporary narrative processes.

1   MULTIMODALITY AS A SEMIOTIC PERSPECTIVE

The papers in this section focus on semiotic processes enacted through multimodal resources. Each paper analyses the basic semiotic mechanisms that allow the creation, diffusion, interpretation and elaboration of multimodal messages of various types, thus showing how integrated frameworks of analysis can disentangle the complexity of contemporary communicative practices.

In Chapter 1, Luna Bergh and Tanya Beelders focus on reference-point phenomena from a cognitive linguistic point of view to detect the creation of complex conceptual metaphors that are realised multimodally. In terms of conceptual framework, eye focus positions represent a combination of essential image schematic abilities and fundamental conceptual archetypes (such as a person's face, part-whole relationships, an agent or movement through space). The results of the eye-tracking study reveal that human bodies and faces (and eyes as parts thereof) do attract attention, as expected given that they are conceptual archetypes. The methodology presented in this chapter integrates approaches to cognition, metaphor and multimodal discourse and provides a new definition of the notion of focus.

In Chapter 2, Krzysztof Ozga shows the existence and implementation of intersemiotic games through case studies based on demotivators. His work offers an integrated methodological approach to the description of empirical material by combining multimodal discourse analysis with semantic and pragmatic models. Demotivators, which constitute a multimodal type of communication, are described in terms of speech act theory, with particular emphasis on face-threatening acts (deprecation), whereby the visual facet of demotivational pictures is compared to the nonverbal components of a speech act. The paper charts the development of demotivators from indicators of deprecation into pragmatic acts that now have a range of other functions. The framework of predicate-argument (semantic) syntax is employed to show how the meanings generated by demotivators are triggered by an interaction between the linguistic and the visual components of demotivators.

In Chapter 3, Giulio Pagani proposes a crucial contribution to the yet underinvestigated theory and practice of multimodal legitimation. The chapter describes and analyses this practice by using a combination of theoretical frameworks from the systemic-functional approach to semiosis. The model makes use of van Leeuwen's (2007) theorising on legitimation in discourse in combination with O'Toole's (1994, 2004) and Safeyaton's (2004) work on models for semiotic readings of built environments. Analytical methodology is also informed by Iedema's (1999, 2001, 2003) approach to dealing with data in terms of its place within generic, resemiotizing, chains.

In Chapter 4, Sabrina Mazzali-Lurati and Chiara Pollaroli contribute to the study of communicative organisation by combining Congruity Theory (Rigotti 2005) and a functional-pragmatic approach in the study of advertising. Texts are conceived to be complex actions hierarchically organized through argument-predicate relations; congruity theory investigates these rhetorical relations which aim at fulfilling the text's overall goal and bringing about a change in the context. Both semantic and pragmatic aspects are integrated in order to reconstruct the communicative organization of multimodal artifacts. This work provides an outline of a systematic model for the account of multimodality in a rhetorical and argumentative perspective.

In Chapter 5, Howard Riley discusses the application of systemic-functional semiotics in the analysis of visual materials, and, specifically, presents a systemic-functional model that is intended to facilitate both the analysis and synthesis of drawings in an art school pedagogical context. The model is developed from Michael O'Toole's (2011) adaptation of Halliday & Matthiessen's (2004) systemic-functional semiotic model for language. This work also revisits and re-elaborates the Hallidayan terminology in the perspective of pedagogy of the arts, thus relabelling the three metafunctions of Functional Grammar as Experiential, Interpersonal and Compositional.

In Chapter 6, Sonja Starc focuses on historical newspaper advertisements which she singles out as a genre. She does so through qualitative text and discourse analysis that integrates Michael Hoey's (2001) theoretical frame

of the culturally popular patterns of text organisation, Theo van Leeuwen's (2005) theory of social semiotics, Halliday's (2002) theory of text and discourse and Kress & van Leeuwen's (2006) grammar of visual design. In order to understand the social and cultural context of the historical advertisements as discourse her analysis also addresses relevant historical newspaper texts using Martin & White's (2005) appraisal theory, and Martin & Rose's (2009) genre theory.

2   MULTIMODALITY AS A TOOL FOR CULTURAL RESEARCH

The papers in this section demonstrate how multimodal analysis offers an effective and comprehensive means for capturing the dynamic nature of cultural phenomena and explaining the phases through which they are created, elaborated and consumed in sociocultural contexts. Particular relevance is given to processes of transmediation that involve transferral and re-elaboration of meanings among different media in a diachronic perspective.

In Chapter 7, Christine Christie combines the insights of social interaction offered by pragmatic approaches to (im)politeness and relevance theory with a multimodal approach to metonymy to analyse the ways in which meanings are transmediated from novel to screen, focusing in particular on the film adaptation of Kazuo Ishiguro's (1989) novel *The Remains of the Day.*

In Chapter 8, Jan Krasni integrates social semiotics, multimodal discourse analysis and mnemonic narrative studies to the study of the dynamic nature of the culture of remembrance. In doing so Krasni focuses in particular on different multimodal texts that were combined to construe the collective memory of the Second World War bombing of Coventry, Belgrade and Dresden. His chapter therefore offers also a comparative perspective on meaning transmediation and historical re-elaboration of events.

In Chapter 9, Michael Rinn revisits rhetorical text analysis and applies it to the study of persuasive multimodal discourse enacted by revisionist websites. Rinn focuses in particular on how websites that deny the World War II Holocaust adopt complex multimodal meaning making practices that are intended to be effective on different levels of text reception which are not immediately evident. He argues that these devices can be recognised by applying and adapting classical rhetorical principles of text analysis and defines three main strategies that these websites enact: argumentative manipulation, polyphonic communication and effective infotainment.

In Chapter 10, Aleksandar Trklja examines multimodal idiomatic texts to establish general patterns and features that have undergone multiple transformations in diachronic processes of resemiotization. Trklja applies the approach to the analysis of a poster for which he creates an inventory of original elements whose changes he analyses in terms of mode and degree. In doing so, he produces a definition of multimodal idiomatic units integrating

elements of semiotic theory (i.e. Iedema 2003), corpus linguistics (i.e. Sinclair 2004) and narratology.

In Chapter 11, Monica Turci proposes a new integrated method of analysis to study translations as cultural phenomena. Turci's comparative study focuses on the illustrations contained in different editions of Kipling's (1899, 1928) *The Jungle Book* and argues that illustrations are of key importance for issues of interpretation because they mediate the reception of a book for its readers in different cultures and languages. Her work examines in particular similarities and differences between the illustrations in the English and Italian editions of *The Jungle Book*. In doing so, she develops a way of reading illustrations that brings together methodologies drawn from linguistics and Translation Studies (e.g. Halliday 1979; Venuti 1995 and Oittinen 2000) to provide a detailed and multifaceted reading of Kipling's illustrations.

3 MULTIMODALITY AS A WAY TO ANALYSE CONTEMPORARY NARRATIVE PROCESSES

The chapters in this section offer examples of applications of integrated methods of analysis to various types of narrative texts to show how the multimodal nature of contemporary narratives involves complex processes of re-elaboration of context related data, and how this process often involves cross-cultural issues.

In Chapter 12, Maria Freddi and Chiara Malagori use an integrated methodology based on corpus linguistics, discourse analysis and translation studies to investigate the multimodal nature of translation for dubbing. Their study focuses on discourse markers as problematic elements of filmic dialogue that highlight the difficulty in capturing and managing the complexity of the multimodal texture of films when translating dialogues for dubbing. Their study also presents a corpus of films that has been created within a two-year international project focusing on the discourse of dubbed films and involving the universities of Pavia, Malta and Loughborough.

In Chapter 13, Arianna Maiorani presents a study based on a method of analysis that incorporates the experience of the online environment in the study of films as multimodal interactive messages. The study focuses on the comparative analysis of film sequences sampled from a select corpus of films in the English language and of their Italian-dubbed versions. Not only does the analysis show the complexity of filmic multimodal discourse and the impact dubbing has on its different levels, but it also shows the potential impact of the multimodal approach on the practice of audio description. Furthermore, the results of the study generate questions on the nature of filmic genre and hint at its possible redefinition.

In Chapter 14, Roberta Taylor combines linguistic ethnography, linguistic anthropology and social semiotics to devise a methodology for studying

the textual function in children's face-to-face interactions. The multimodal analysis of the textual metafunction allows close examination of the flow of narrative through multiple modes in children's classroom meaning-making. This reveals how the cohesive device of metaphor can be presented not simply through language but also through embodied modes. This work introduces the notion of postural intertextuality (Taylor 2006, 2012) as intrinsic to children's meaning-making and gives instances of intertextual references being realised through the embodied modes of posture and gesture.

In Chapter 15, Sabine Wahl introduces a new notation method to transcribe the harmonious interplay of moving pictures, lyrics, text, music and sound effect, showing how musical scores and multimodal texts share the same nature of multimodal communicative processes and cultural phenomena. The analysis of television commercials in particular shows that narrative is composed of a complex interplay of pictures and choice of music. Language, the conventional semiotic resource for the creation of narratives, however, occurs mainly as on-screen text which provides a kind of interpretation of the complex multimodal narrative. Wahl annotates the television commercials using ELAN software (http://tla.mpi.nl/tools/tla-tools/elan/elan-description/) and transcribes the semiotic resources that are employed simultaneously in a score layout to analyse complex multimodal narrative processes.

In Chapter 16, Janina Wildfeuer proposes a method of analysis of filmic narrative based on the integration of pragmatics and discourse semantics. She focuses in particular on inferential strategies and logico-semantic relations in the systematic construction of meaning. This work aims at the textual logic of filmic discourse as a complex form of multimodal narrative.

REFERENCES

Bateman, John. 2008. *Multimodality and Genre.* Basingstoke: Palgrave Macmillan.
Bateman, John and Karl-Heinrich Schmidt. 2011. *Multimodal Film Analysis.* London and New York: Routledge.
Bublitz, Wolfram and Christian R. Hoffmann. 2010. *Narrative Revisited: Telling a Story in the Age of New Media.* Amsterdam: John Benjamins.
Dennis, Everett E. and Melvin L. De Fleur. 2009. *Understanding Media in the Digital Age.* London: Pearsons Education.
Eggins, Suzanne. 2004. *An Introduction to Systemic Functional Linguistics.* London: Continuum.
Forceville, Charles J. 2009. "Metonymy in Visual and Audio Visual Discourse." In *The World Told and the World Shown,* edited by Eija Ventola and Arsenio Jesús Moya Guijarro, 56–84. Basingstoke: Palgrave Macmillan.
Gee, James Paul. 2003. *What Video Games Have to Teach Us about Learning and Literacy.* Basingstoke: Palgrave Macmillan.
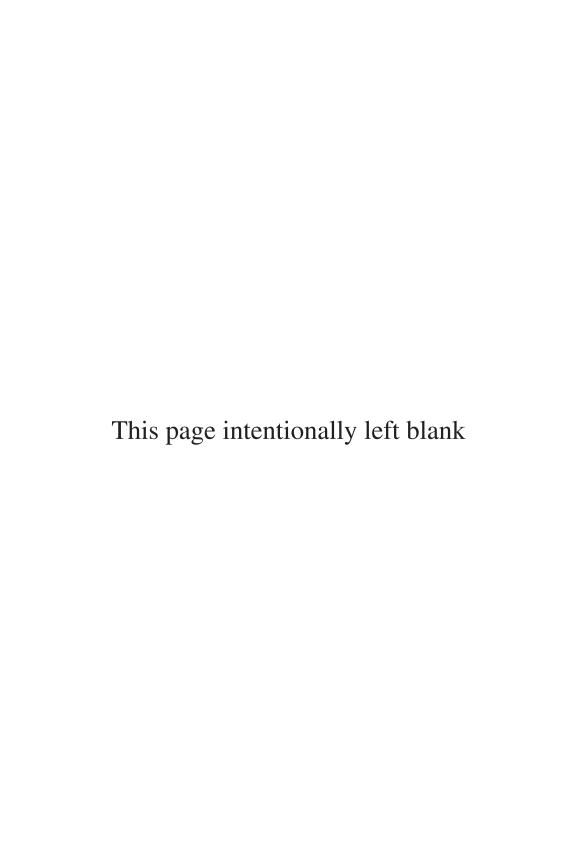Gibbons, Alison. 2010. *Multimodality, Cognition, and Experimental Literature.* London and New York: Routledge.
Halliday, Michael A.K. 1979. *Language as Social Semiotic: The Social Interpretation of Language and Meaning.* London: Arnold.

———. 2002. (1977). "Text as Semantic Choice in Social Contexts." In *M.A.K. Halliday: Linguistic Studies of Text and Discourse,* edited by Jonathan Webster, 23–84. London and New York: Continuum.

Halliday, Michael A.K. and Christian M.I.M. Matthiessen. 2004. *An Introduction to Functional Grammar.* London: Arnold.

Hoey, Michael. 2001. *Textual Interaction. An Introduction to Written Discourse Analysis.* London and New York: Routledge.

Iedema, Rick. 1999. "Formalising Organisational Meaning." *Discourse and Society* 10 (1): 49–65.

———. 2001. "Resemiotization." *Semiotica* 137 (1/4): 23–39.

———. 2003. "Multimodality, Resemiotization: Extending the Analysis of Discourse as Multi-Semiotic Practice." *Visual Communication* 2 (1): 29–57.

Isiguro, Kazua. 1989. *The Remains of the Day.* London: Faber & Faber.

Jones, Carys and Eija Ventola. 2008. *From Language to Multimodality. New Developments in the Study of Ideational Meaning.* London: Equinox.

Kipling, Rudyard. 1899. *The Jungle Book.* Illustrated by John Lockwood Kipling, W.H. Drake and P. Frenzeny. London: Macmillan.

———. 1928. *Il libro della jungla.* Traduzione di Umberto Pittola con illustrazioni di Memo Vagaggini. Milano: Alberto Corticelli Editore.

Kress, Gunther. 2010. *Multimodality.* London and New York: Routledge.

Kress, Gunther and Theo van Leeuwen. 2001. *Multimodal Discourse: The Modes and Media of Contemporary Communication.* London: Arnold.

———. 2006. *Reading Images: The Grammar of Visual Design.* London and New York: Routledge.

Maiorani, Arianna. 2009a. *The Matrix Phenomenon. A Linguistic and Multimodal Analysis.* Saarbrücken: VDM Verlag Dr Muller.

———. 2009b. "Developing the Metafunctional Framework to Analyse the Multimodal Hypertextual Identity Construction: *The Lord of the Rings* from Page to MMORPG." In *The World Told and the World Shown,* edited by Eija Ventola and Arsenio Jesús Moya Guijarro, 220–241. London: Palgrave.

———. 2010. "Hyper-Discourse and Commercial Strategies: The Matrix Website Example." In *Thresholds and Potentialities of Systemic Functional Linguistics: Multilingual, Multimodal and Other Specialised Discourses,* edited by Elizabeth Swain, 206–226. Trieste: EUT.

———. 2011. "Reading Movies as Interactive Messages: A Proposal for a New Method of Analysis." *Semiotica* 187 (1/4): 167–188.

Martin, James R. and David Rose. 2009. *Genre Relations.* London and Oakville: Equinox.

Martin, James R. and Peter R.R. White. 2005. *The Language of Evaluation. Appraisal in English.* Basingstoke and New York: Palgrave MacMillan.

Martinec, Radan and Theo van Leeuwen. 2007. *The Language of New Media Design: Theory and Practice.* London and New York: Routledge.

Norris, Sigrid, ed. 2011. *Multimodality in Practice.* London and New York: Routledge.

O'Halloran, Kay L., ed. 2004. *Multimodal Discourse Analysis: Systemic Functional Perspectives.* London: Continuum.

O'Halloran, Kay L. and Bradley Smith. 2011. *Multimodal Studies.* London and New York: Routledge.

Oittinen, Riitta. 2000. *Translating for Children.* New York and London: Garland.

O'Toole, Michael. 1994. "A Semiotics of Architecture." In *The Language of Displayed Art.* London: Leicester University Press, 85–144.

———. 2004. "Opera Ludentes: The Sydney Opera House at Work and Play." In *Multimodal Discourse Analysis: Systemic Functional Perspectives,* edited by Kay L. O'Halloran, 11–27. London: Continuum.

———. 2011. *The Language of Displayed Art*. London and New York: Routledge.

Page, Ruth. 2009. *New Perspectives on Narrative and Multimodality*. London and New York: Routledge.

Rigotti, Eddo. 2005. "Congruity Theory and Argumentation." Argumentation in Dialogic Interaction, Special Issue of *Studies in Communication Sciences*, 75–96.

Safeyaton, Alias. 2004. "A Semiotic Study of Singapore's Orchard Road and Marriott Hotel." In *Multimodal Discourse Analysis: Systemic Functional Perspectives*, edited by Kay L. O'Halloran, 55–79. London: Continuum.

Sinclair, John McHardy. 2004. *Trust the Text*. London and New York: Routledge.

Stenglin, Maree, Susan Hood and Shoshana Dreyfus. 2010. *Semiotic Margins: Meaning in Multimodalities*. London: Continuum.

Swain, Elizabeth, ed. 2010. *Thresholds and Potentialities of Systemic Functional Linguistics: Multilingual, Multimodal and Other Specialised Discourses*. Trieste: EUT.

Taylor, Roberta. 2006. "Actions Speak as Loud as Words: A Multimodal Analysis of Boys' Talk in the Classroom." *English in Education* 40: 66–82.

———. 2012. "Messing about with Metaphor: Multimodal Aspects to Children's Creative Meaning Making." *Literacy* 46: 156–166.

Van Leeuwen, Theo. 1999. *Speech, Music, Sound*. London: Macmillan.

———. 2005. *Introducing Social Semiotics*. London and New York: Routledge.

———. 2007. "Legitimation in Discourse and Communication." *Discourse and Communication* 1 (1): 91–112.

———. 2011. *The Language of Colour: An Introduction*. London and New York: Routledge.

Ventola, Eija, Cassily, Charles and Martin Kaltenbacher. 2004. *Perspectives on Multimodality*. Amsterdam: John Benjamins.

Ventola, Eija and Arsenio Jesús Moya Guijarro, eds. 2009. *The World Told and the World Shown: Multisemiotic Issues*. Basingstoke: Palgrave Macmillan.

Venuti, Lawrence. 1995. *The Translator's Invisibility. A History of Translation*. London: Routledge.

Section 1

Multimodality as a Semiotic Perspective

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1 An Eye-Tracking Account of Reference Points, Cognitive Affordance and Multimodal Metaphors

Luna Bergh and Tanya Beelders

1.1 INTRODUCTION

Eye-tracking experiments provide results by recording readers' eye fixations on a particular page, as viewed on a screen. Our aim in this chapter is to show correspondences between reference points (Langacker 1993) and these eye-foci positions. Drawing on the results of an eye-tracking experiment we address the following questions in our analysis of the data: Where do readers focus their gaze in a multimodal text? How can these findings be accounted for in terms of a reference-point perspective? Moreover, how can the interpretation of the findings be enhanced in view of cognitive affordance and with regard to metaphorical patterns? What are the implications of the findings of the eye-tracking experiment for multimodal material design, especially printed matter?

The eye-tracking experiment referred to in this chapter (which is described in detail in Section Three) tested subjects' focus on and recall of elements in multimodal texts in their search for information relating to a marketing campaign whose theme was 'Going Green' (see Section Three). Multimodality is generally seen as a form of communication involving more than two modes of conveyance (e.g. speech, writing and pictures). What is especially vital to our chapter is the view of colour and movement or action as semiotic modes in addition to other options such as the spoken word, written text and the use of facial expressions. Colour is not generally tested in terms of eye-tracking, given that it is difficult to determine whether it is the colour or another feature that has attracted attention. For our framework, multimodality is defined as "the use of several semiotic modes in the design of a semiotic product or event, together with the particular way in which these modes are combined" (Kress and van Leeuwen 2001: 20). Of particular importance here is that our study fits into what these authors call "an approach in which colour plays a role equal to language" and communicative practice and interactivity is emphasized (Kress and van Leeuwen 2001: cover).

The project was informed and enriched by the notion of 'active vision' (Findlay and Gilchrist 2003), which provides an integrated account of seeing and looking, takes into consideration the role of eye movements and

emphasises visual attention (Ware 2008). These aspects tie in with other cognitive phenomena in our study, such as working memory. From a semiotic perspective it is crucial that active vision involves "understanding perception as a dynamic process" (Ware 2008: ix) where, through directing one's gaze through the use of automatic, fast eye movements, "the brain grabs just those fragments that are needed to execute the current mental activity" (Ware 2008: ix). The basis of visual thinking is 'pattern perception', which is partly innate and partly learned through visual interaction with the world. Visual designs almost always have aspects that support both visual thinking through pattern finding and aspects processed through the language systems. Broadly speaking, in cognitive neuroscience every piece of stored information can be thought of as a pattern, which entails that complex patterns [such as faces] are patterns of patterns (Ware 2008: 63, 109). This is of particular significance for semiotic analysis since the generalised idea of a pattern applies to more than just shapes. As Ware (2008: 64–65) argues: "Finding patterns is the essence of how we make sense of the world". Ware further argues that input patterns from the visual world activate patterns of responding, such as eye movement sequences. The processing of visual thinking also involves the interplay between patterns of activity in the nonvisual, verbal processing centres of the brain (Ware 2008: 114).

The focus of this chapter is on reference-point phenomena and related cognitive phenomena that account for the data from a Cognitive Linguistics (CL) (e.g. Lakoff 1987) perspective and indicate how reference points guide 'conceptual blending' which, in turn, forms complex metaphors (e.g. Lakoff and Johnson 1999). Our goal is to show that the patterns in these complex conceptual metaphors are realised as verbal, pictorial and multimodal metaphors in the given texts. The analysis is thus based on well-established models (see 1.2 below). However, in line with our definition of multimodality above, the contribution follows from the interaction of the combination of key elements in active vision, divergent approaches in CL, cognitive affordance and eye-tracking. These terms are discussed in the sections to follow. In Section Two, we outline the rational underlying our use of four key concepts in our analysis: active vision, cognitive linguistics, cognitive affordances and eye-tracking. In Section Three, we summarise the experiment and our key findings. In Section Four we discuss the viewing patterns captured on the advertisements and in Section Five we relate the findings of the eye-tracking results to the theory discussed in the previous sections.

1.2　CONCEPTUAL-THEORETICAL FRAMEWORK

1.2.1　Active Vision

The notion of active vision (Findlay and Gilchrist 2003) has profound implications for multimodal design and not only informs, but also relates directly to the overall purpose of our project, namely, to test subjects' visual focus

in multimodal texts in their search for information relating to a particular theme (*Going Green*) by means of an eye-tracking experiment. The importance of green (i.e. an indication of environmental health and awareness) relates to our assumption of colour as a semiotic mode. Five premises underlying the theory of active vision (Findlay and Gilchrist 2003) are relevant here. First, the premise that visual thinking is based on pattern perception, as was pointed out above. Second, the premise that almost all seeing involves 'visual search', although we are not constantly aware of it (Ware 2008: 41). Third, the premise that efficient visual search can be achieved through the use of 'pop-out properties' (Ware 2008: 42). The strongest pop-out effects occur when a single target object differs in some feature from all other objects. Pop-out contrast is defined in terms of the basic features that are processed in the primary visual cortex, namely, colour (including hue and lightness), orientation, size, motion and stereoscopic depth (Ware 2008: 29) as well as elongation, spatial layout and form (Ware 2008: 42). The fourth premise is that visual thinking is based on a 'hierarchy of skills', which means that sophisticated cognitive skills build on simpler ones. Newborns have little visual skill except to identify objects and "a special propensity to fixate on human faces" (Ware 2008: 171), but also the neural architecture that allows the capabilities to develop. Although human mental models of space perception are grounded in real-world interaction, the neural architecture and the most basic human capabilities (such as understanding the emotional expressions of fellow humans) are innate (Ware 2008: 103).

The final premise is that, as Ware (2008: 62) explains, when we see patterns in graphic designs, we are mostly relying on the same neural machinery that is used to interpret the everyday environment. However, there is a 'layer of meaning'—"a kind of natural semantics" (Ware 2008: 62)—that is built on top of this. For example, a large shape is used to represent a large quantity in a bar chart. This ties in with two tenets of Cognitive Semantics, namely, that "cognitive models are mainly perceptually determined" and that "semantic elements are based on spatial or topological objects (not symbols that can be composed according to some system of rules)" (Gärdenfors 1999: 22). This stance differs from some of the more traditional approaches and needs to be kept in mind regarding semiotic elements and the analysis in this chapter. Gärdenfors (1999: 22) proposes the notion of a conceptual space as a framework for geometric structure in Cognitive Semantics. A conceptual space comprises a number of quality dimensions such as colour, pitch, temperature, weight and the three ordinary spatial dimensions, and corresponds closely with Langacker's (1987: 147) domains. Also, as explained below, all linguistic constructions in this framework are symbolic.

Ware (2008: 62) argues that the natural semantics discussed above interweave our spoken language, as well as the language of design. This is consistent with Lakoff and Johnson's (2003) argument that spatial metaphors are not just ways of making language more vivid, but that they are fundamental