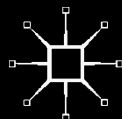


LANGUAGE AND COGNITIVE STRUCTURES OF EMOTION

Prakash Mondal



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palgrave
macmillan

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ISBN 978-3-319-33689-3 ISBN 978-3-319-33690-9 (eBook)
DOI 10.1007/978-3-319-33690-9

Library of Congress Control Number: 2016951230

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Printed on acid-free paper

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Preface

This book set out with the idea of investigating the relationship between intensionality, language and the cognitive structures underlying emotive expressions in language. On the one hand, the linguistic properties of intensionality have a curious reflex of mentality, especially when these properties are apprehended through the lens of intensionality's manifestation in natural language. In intensional contexts a nominal term resists the substitution of itself for another term equivalent—formally or otherwise—to it, or a nominal term denoting an object refers to something non-existent in our world, or a quantificational nominal expression can have a non-specific reading. Some of the facets of intensionality (a reference to non-existent entities such as unicorns, or treating 'the capital of Australia' and 'Canberra' distinctly because one has distinct beliefs associated with each of the terms) are decidedly grounded in the machinery of our mental representations. All three properties in some combination or other are typically associated with intensionality. It is not often clear why intensionality exhibits the three properties in diverse contexts of linguistic expressions the way it does, and hence intensionality has always puzzled philosophers of language and linguists alike. On the other hand, emotive representations as revealed through linguistic expressions of emotion belong in a domain that appears to be socioculturally variable and biologically fluctuating within individuals, and also across human communities. Hence, emotive expressions, on the face of it, appear to be

logically insignificant and linguistically nondescript structures in having a peculiar expressive, as opposed to referential, dimension. Far from it: emotive expressions themselves bear intensional elements which give rise to certain hitherto unrecognized linguistically interesting properties. The connection between emotive expressions and intensionality runs much deeper than can ordinarily be supposed.

Therefore, the idea of a book such as this was conceived when I realized that the puzzles of intensionality are compounded when they are manifested in linguistic expressions of emotions because linguistic constructions that are both intensional and emotive evince far more bizarre features than intensionality does alone. As I probed further, it turned out that the relevant linguistic patterns, albeit idiosyncratic on the surface, conceal certain hidden logically compelling regularities that can only be captured by means of cogent generalizations. As I dug deeper into these generalizations, the formulations developed began to strain out of the confinements of a merely linguistic curiosity as it transpired that the generalizations have deeper consequences for the cognitive system that relates emotive structures to linguistic structures. The underlying assumption is that there is a distinct linguistic system or knowledge base which ‘communicates’ or simply interacts with another system dedicated to emotions, or at least to emotive representations. These systems need not be modular in the trivial or traditional sense of the term ‘module’; rather, they can be functionally and structurally distributed over the neural networks of the human brain and are not fully encapsulated systems by virtue of sharing structures or representations, although the encoding of the representations may vary from one given cognitive system to another. Beyond that, the generalizations, as argued here, have far-reaching consequences for the nature of cognition and the fabric of linguistic meaning. In a nutshell, this book has come out of the need to pinpoint the locus where mental structures underlying emotive expressions and linguistic structures with their intensional properties meet, giving rise to intriguing logical patterns that encompass both the embodied (emotions and emotive content) and the abstract (intensional elements of linguistic expressions). With this background in place, it is time to outline where the book is heading as readers sift through its content.

I begin by clarifying the notions of intensionality, intentionality and emotive content, and then present some puzzles that involve emotive predicates in intensional contexts. One of the main questions that constitutes the central concern of this enquiry is: what do the semantic structures of intensional emotive constructions uncover about the cognitive/conceptual structures that characterize expressive/affective content? A careful inspection of the interaction of intensional contexts and emotive predicates, based on a range of intensional emotive constructions, enables some surprising generalizations, of which the central one is that variations in the intensionality of intensional emotive constructions—as a function of the satisfaction of three well-defined criteria of intensionality—result in concomitant variations in the semantic/conceptual structures of emotive expressions. This helps demonstrate that the structure of linguistic meaning is not merely derived within grammar but is also constrained by a combination of logical, mental/cognitive and linguistic properties, as well as properties of embodiment. This is so regardless of how such linguistic meanings are represented in notations or meta-languages, even though the observations have in fact been described using the apparatus from Jackendoff's *conceptual semantics*.

The emerging generalizations express a character of logical necessity, so much so that the essential idea outlined above is captured in the form of a theorem entitled *The Correspondence Theorem for the Cognitive/Conceptual Structures of Emotive Expressions*, which states that each intensional pattern/type corresponds to a different cognitive/conceptual structure of emotive expression(s), or vice versa. The book argues that the implications of this seemingly simple theorem could prove to be far-reaching. On the one hand, it lends credence to the view that the content of emotive expressions can have a cognitive grounding as well as a bodily basis, and on the other, it helps determine the operations of an 'interface' that connects language to emotion within the architecture of our cognitive machinery.

Having clarified the central themes of the book, now I intend to familiarize readers, in broader outline, with the overall structure of the volume so that they can be better guided through its pages (although a detailed overview of is also presented at the end of Chapter 1). Chapter 1 poses

the linguistic puzzles and then places them in the wider context of the relation between language, cognition and emotive content. Since it is observed in this chapter that the linguistic puzzles arise only from contexts involving intensionality and emotive expressions, it becomes necessary to figure out why emotive expressions in intensional contexts behave the way they actually do, and which factor (intensionality or emotive expressions) is exclusively responsible for this. This question is answered piece by piece in the succeeding chapters, but not all at once. Chapter 2 builds on the observations made in Chapter 1 and dwells on the nature of emotive content in order to demonstrate how such content and intensionality are intimately connected. Most of the chapter is conceptual in nature—that is, most of it is aimed at clarifying the conceptual mess. Chapter 3 advances the conclusion, which the book arrives at upon an examination of the syntactic structures of the relevant constructions, that there is no valid syntactic explanation for the linguistic patterns observed. A semantic or conceptual explanation is called for, but not all semantic theories are found to have the descriptive machinery to accommodate the generalizations. Only conceptual semantics is found to possess the descriptive power to express the relevant generalizations. However, since the generalizations harden into logically necessary patterns, a mere descriptive analysis would simply be weak and hence an axiomatization of the generalizations is provided. The first part of Chapter 4 carries forward the logical consequences following from the axiomatization developed in Chapter 3 and articulates a formal account of the ‘interface’ that connects language to emotion, while the second part is largely speculative, especially in certain parts in which it entertains the evolutionary considerations the insights afford and fleshes out the cognitive implications of the work.

Thus, readers with a basic understanding of set theory can breeze through Chapters 3 and 4, whereas other readers may find the formal details overwhelming and hence may skip these portions if they wish to do so. The formal rigor has been necessary in these chapters in view of considerations having *intrinsically* to do with the formal charter of the generalizations concerned. The descriptive portions in later chapters, especially Chapter 5, capture the essential ideas developed and stitch together many other emerging conclusions on the nature of cognition,

emotive intensionality, knowledge and the computational encoding of intensional emotive constructions.

This book sketches the formal territory that ensconces linguistic structures and emotive content in the same connected matrix. Much more needs to be uncovered. But I hope that the formal generalizations articulated here prove to be useful for further research in this direction. I should note that this work has not done justice to extant or past theories of emotive content and treatments of emotive expressions since it has not included them for critical comparisons. Except for a brief discussion in Chapter 1 on the absence, in current accounts of emotive expressions, of any explorations into the issues covered here, the book has not deliberated on other accounts of emotive expressions. However, this is necessitated by the consideration that bringing into context various accounts or hypotheses whose central concerns are not at all parallel or even tangential to the issues at hand is nugatory.

If anything significant has been missed out, the fault is, of course, mine. With this caveat I encourage readers to discern hidden connections, if any, among the threads unexplored or neglected, and to form a more expansive view of language–emotion relations. I invite linguists, philosophers of language, philosophers of mind, emotion theorists, anthropologists, cognitive scientists of all persuasions and anyone else who cares about language–emotion relations to delve into the book. My own understanding is sure to expand in direct proportion to the extent that readers can learn from these ideas expressed here. I dedicate this book to the intellectual world where it belongs.

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Acknowledgements

This book would not have materialized without my encounter with intensionality, which is as baffling as anything deserving the epithet ‘baffling’ can possibly be. But then why intensional emotive constructions? I began thinking about the idea of seeing intensionality against emotive constructions when the basic content of this book was being conceived as part of my PhD dissertation. Hence I thank my dissertation supervisors Rukmini Bhaya Nair and Bijoy Boruah, who encouraged me to go ahead with the blooming idea as I was geared up to step into the hazily demarcated territory of intensional emotive constructions.

Thanks also go to the scholars who have been generous enough to take time to read through the pivotal sections of the material incorporated in the book. Notable among them are (in no particular order) Pieter A. M. Seuren, Ezra Keshet, Marcelo Dascal and Wilfrid Hodges. I’m enormously grateful to them for their invaluable comments, criticisms, judgments on the data, and deliberations. It should be mentioned that not every one of them agrees with me. Their contribution is worthy of mention nonetheless. I’m also thankful to the anonymous reviewer whose comments on certain issues dealt with here have helped enrich many parts of the book.

I’m particularly grateful to Avishek Chakraborty for many discussions we’ve had about topics touching on the issues discussed here. His scholarly comments have helped shape my ideas in many ways. Akshay

Chaitanya deserves a special mention for understanding much of what I say. Now I take this opportunity to thank Amrit Srinivasan for her unflinching support and unending enthusiasm for my work. I'm in a special way indebted to the Indian Institute of Technology Delhi since a good deal of the material was developed there.

Since part of Chapter 2 has already been published, it is important to acknowledge this with a mention of the publication. The following article is of relevance

How the intentionality of emotion can be traced to the intensionality of emotive expressions: Intensionality in emotive predicates. *Pragmatics and Cognition Vol 21(1): 35–54* (2013). (John Benjamins).

No less important is the role played by Esme Chapman, my editor at Palgrave Macmillan, who invited me to submit a proposal for the book project I had conceived. I thank her for understanding its significance and also the requirement for it to be shaped into a full-fledged monograph. In this connection, Chloe Fitzsimmons at Palgrave Macmillan needs to be thanked as well for all the valuable assistance she rendered to me.

Finally, I thank P.A.S for standing by me while I was busy seeing my work through.

Contents

1	Introduction: Intensionality and Emotive Expressions	1
1.1	On the Concept of Emotion and Emotive Content	2
1.2	The Concept of Intentionality	6
1.3	The Concept of Intensionality	9
1.4	The Relation of Intensionality to Intentionality	12
1.5	Intensionality and Cognitive Structures Underlying Emotive Expressions: Some Problems with Intensional Emotive Constructions	16
1.6	How Does Intensionality Alter the Transduction of the Possible Cognitive Structures Underlying Emotive Expressions?	23
1.6.1	Substitution Failure	26
1.6.2	Lack of Existential Import	26
1.6.3	Availability of Specific/ <i>de re</i> /Relational and Non-specific/ <i>de dicto</i> /Notional Reading	26
1.7	The Overall Picture So Far: Toward a Map of Intensionality	31
1.8	Further Problems and Challenges	38
1.9	An Overview of the Book	40
	References	43

2	How the Intentional Content of Emotion Can Be Traced to the Intensionality of Emotive Expressions	49
2.1	Zooming in on the Uniqueness of the Intentionality of Emotive Contents	51
2.2	Why a Quirky Case in Emotive Intensionality?	60
2.3	Emotion-Perception Homology in Emotive Expressions	65
2.4	The Picture So Far	69
	References	70
3	Emotive Intensionality, Meaning and Grammar	71
3.1	What Does Emotive Intensionality Reveal About Meaning and Grammar?	72
3.1.1	Is There Any Syntactic Explanation for the Behavior of Intensional Emotive Predicates?	73
3.1.2	What Insights into the Nature of Meaning in Relation to Grammar Are Gained?	77
3.1.3	How to Square Up Emotive Intensionality with Conceptual Semantics?	88
3.1.4	The Nature and Form of Meaning Within the Fabric of Grammar	98
3.2	Taking Stock of the Situation	107
	References	108
4	Toward an Architecture of the Language–Emotion Interface	111
4.1	The Architecture of the Language–Emotion Interface	112
4.1.1	Operations in the Architecture of the Language–Emotion Interface	114
4.1.2	A Proof of <i>The Correspondence Theorem</i>	127
4.2	What Underlies Clusters of Intensional Emotive Predicates?	129
4.3	Sketching an Evolutionary Landscape	136
4.4	Implications	139
4.4.1	Linguistic Implications	139
4.4.2	Cognitive Implications	141
4.5	So Far...	147
	References	147

5 Conclusion	151
5.1 Intensional Emotive Constructions, Computation and Cognitive Tractability	153
5.2 Intentionality, Intensionality and Emotive Expressions	163
5.3 Emotive Intensionality, Epistemology and Cognition	165
5.4 Problems and Further Challenges	176
References	177
 Index	 179

List of Figures

Fig. 1.1	A continuum of intensional behavior in different classes of predicates	31
Fig. 1.2	Ontological organization of different classes of emotive predicates in a hierarchy	33
Fig. 1.3	Conflation of intensionality in emotive predicates and intersecting paths of cognitive structures of affect	37
Fig. 3.1	A tree diagram for the lexical semantic structure of 'break'/'open'	74
Fig. 3.2	A tree diagram for the lexical semantic structure of 'cough'/'sneeze'	75
Fig. 3.3	A tree diagram for the skeletal syntactic structure of monoclausal intensional emotive constructions	75
Fig. 3.4	Tree diagrams for LF representations of monoclausal intensional emotive constructions	76
Fig. 3.5	The architecture of mind in Jackendoff's framework	87
Fig. 3.6	The 'subset of' relation in the set A	102
Fig. 4.1	Accommodation of intensional patterns at the language–emotion interface	120
Fig. 4.2	Ontological organization of different classes of emotive predicates in a hierarchy	130
Fig. 4.3	Different classes of emotive predicates in terms of ontological inclusion/exclusion	135

1

Introduction: Intensionality and Emotive Expressions

The connections between intensionality and emotive content as expressed in natural language will be traced to determine how patterns in the relation between intensionality and emotive expressions reveal something about the way emotion as an independent component of the human mind interacts with the cognitive domain of language. Intensionality cannot be characterized without the notion of intentionality in that intensionality has something to do with non-specificity or opacity, and this opacity has partly to do with the underdetermination or under-specification of aboutness or directedness toward objects or entities. This characterizes the essence of intentionality. Such non-specificity or opacity has parallels in both language and structures of emotive content in the sense that intensional elements in quantificational contexts show a systematic semantic variability in the way non-specificity or opacity is expressed, and contents of (emotional) affect reveal similar patterns. Another reason why two distinct but otherwise related phenomena—intensionality and intentionality—are co-defined in association with each other is that intentionality appears to be a much more primitive form of biological feature (and maybe it was also present in earlier life-forms) from which language—especially linguistic meaning—has

evolved (Searle 1983). And intensionality constitutes a significant and, at the same time, baffling aspect of linguistic meaning.

As we will see, intensionality plays a major role in the linguistic expression and conceptualization of emotive content. This book will make explicit how and in what ways such inseparable links between intensionality, linguistic meaning and emotive content exist. The way they relate to each other can unravel the fundamental form of the cognitive structures of emotion and the nature of linguistic meanings within the fabric of grammar. In addition, insights from such an exploration of the liaison between intensionality, linguistic meaning and emotive content will also help unlock the nature of operations that occur at the interface that connects language to the domain of emotion in the human mind.¹ Before we move on to the problems that have been posed in this chapter, let's first try to clarify the concepts of emotion, intentionality and intensionality as they characterize the boundaries within which the relation between intensionality, linguistic meaning and emotive content is configured. In the discussions that follow, no strict attempt at precisely demarcated definitions will be made; however, the relevant notions will be characterized, insofar as they can be tailored to fit the descriptive and explanatory analyses in the book.

1.1 On the Concept of Emotion and Emotive Content

It is difficult to come up with a widely applicable definition of emotion given the diverse range of differences in the ways in which the word 'emotion' can be expressed and construed. Studies on emotion have often been neglected because of its fuzzy, hazy and labyrinthine character. The study of emotion in social and biological sciences has, however, gained a

¹The word 'domain' has been used here with a minimum of presuppositions with respect to any commitment to claims about modularity or non-modularity. Suffice it to say, the current use of the word 'domain' is neutral on issues of modularity; it has been used throughout the book in its trivial sense, which warrants an *ontologically* different organization of mental structures formed around emotive content, which requires at least a kind of interconnectedness of configurations structured around emotive contents in the mind, however loose it may be. Further clarifications on this issue will appear in Chapter 4.