

UNIVERSIDAD NACIONAL DE RÍO CUARTO

SECRETARIA DE POSGRADO Y COOPERACIÓN INTERNACIONAL

FACULTAD DE CIENCIAS HUMANAS

MAESTRÍA EN INGLÉS CON ORIENTACIÓN EN LINGÜÍSTICA APLICADA

TESIS FINAL DE MAESTRIA

"La emoción en los cuentos de hadas: La expresión escrita y oral del afecto y la graduación"

de

Lilián I. Ariztimuño

Directora: Cristina Boccia Co-directora: Griselda Bombelli

Año 2016

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Resumen

El propósito de este estudio es describir y explicar la asociación entre la expresión escrita y oral de la emoción en tres cuentos de hadas utilizando el Sistema de VALORACIÓN - AFECTO y GRADACIÓN - para la descripción de la expresión escrita y una adaptación de la taxonomía fonética propuesta por Roach, Stibbard, Osborne, Arnfield, y Setter (1998) para la expresión oral. Los cuentos seleccionados fueron escritos por los hermanos Grimm y leídos en voz alta en inglés británico. El análisis fue cualitativo y cuantitativo. En primer lugar, se etiquetaron las instancias verbales de AFECTO INSCRIPTO. La realización oral de afecto se dividió en unidades tonales que se analizaron perceptualmente de acuerdo a las características suprasegmentales y paralingüísticas empleadas por la cuentista. Luego, estos resultados cualitativos se transformaron en datos cuantitativos al calcular porcentajes para i) los subtipos de AFECTO, ii) los modos de GRADACIÓN y iii) la frecuencia de ocurrencia de los distintos valores suprasegmentales. Además, se obtuvieron más datos cuantitativos (medidas acústicas numéricas) para la altura y amplitud tonal, el volumen y el tempo. Los datos cualitativos y cuantitativos se analizaron siguiendo una metodología de investigación secuencial mixta. En base a los datos obtenidos se describió y explicó la asociación entre la expresión escrita y oral de las emociones y se propuso una taxonomía provisional de perfiles fonéticos para los subtipos de AFECTO INSCRIPTO observados. Asimismo, se estableció que distintos grados de intensificación se pueden realizar mediante recursos escritos y fonéticos y que tales recursos pueden exhibir una correlación lineal. Las generalizaciones obtenidas arrojan implicancias pedagógicas para la enseñanza y el aprendizaje de la expresión de la emotividad en la lectura en voz alta de cuentos de hadas en el contexto de profesorados de inglés como lengua extranjera.

The purpose of this study is to explore and explain the association between the written and oral expression of emotions in three fairy tales drawing upon the system of APPRAISAL – AFFECT and GRADUATION – and an adaptation of Roach, Stibbard, Osborne, Arnfield, and Setter's (1998) phonetic taxonomy. The sample consisted of stories written by the brothers Grimm and read aloud in British English. The analysis conducted was both qualitative and quantitative. Emotion terms were first manually labelled for INSCRIBED AFFECT and the tone units containing those terms were perceptually valued in terms of the suprasegmental and paralinguistic features used by the storyteller. These qualitative results were then transformed into quantitative information as percentages were calculated for i) AFFECT subtypes, ii) GRADUATION modes and iii) frequency of occurrence of suprasegmental values. Additional quantitative information (acoustic numerical measures) was obtained for pitch height and range, loudness and tempo. In order to analyse the qualitative and quantitative data, a sequential mixed methods research design was adopted. On the basis of the results obtained the association between the written and oral expression of emotion has been described and explained and a provisional taxonomy of phonetic profiles for the INSCRIBED AFFECT subtypes has been proposed. This study also found that different degrees of intensification may be realized by means of written and phonetic resources and that these resources may exhibit a linear correlation. Based on the generalizations obtained, pedagogical implications have been suggested for the teaching and learning of the expression of emotions when reading aloud fairy tales at university level EFL teacher training programs.

To my family, for their unconditional support, patience and love

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List of Abbreviations and Acronyms

- EFL: English as a Foreign Language
- SFL: Systemic Functional Linguistics

GPS: Generic Structure Potential

Kth: King Thrushbeard

Rum: Rumpelstiltskin

Elsh: The elves and the shoemaker

SPSS: Statistical Package for the Social Sciences

Hz: Hertz

- dB: Decibel/s
- s: seconds
- F0: fundamental frequency

syl: syllables

CHAPTER I

INTRODUCTION

This introductory chapter is organized in three sections. Section 1 describes the context and purpose of this study. Section 2 states the aim of the study and presents the research questions, the hypotheses and the objectives. Finally, Section 3 presents an overview of the different chapters that constitute this thesis.

Section 1

I. 1 Context and purpose of the study

Oral performance is a key issue in the field of teaching English as a foreign language (hereafter, EFL), especially in teacher training programs. Effective reading aloud is an every-day challenge for English teachers and thus a core objective of teacher training centres. At the level of university teacher programs of study, pronunciation teachers need to conduct systematic work on the phonological choices that readers make in order to project a particular context of interaction when reading aloud¹ (Brazil, 1997). The expression of emotion is recognized as a defining feature of contexts of interaction as it provides linguistic cues related to writers' feelings and attitudes. However, even though the expression of emotion is assigned an essential role in effective reading aloud, no specific framework is available at the moment for a systematic EFL teaching approach.

¹ Phonological choices refer to decisions the speakers make in relation to prominence, tone, division into tone units, key and termination which affect the linguistic status of information.

Of special interest for this study, and already part of the curriculum at the teacher training college at University of La Pampa, is the expression of emotion in human speech. The oral expression of emotions by means of the use of suprasegmental and paralinguistic features², *emotional speech*, is usually developed in the different subjects that deal with the pronunciation of English at the University of La Pampa. This topic, however, is mainly studied following the teachers' intuitions as no framework specifically designed to face this area of knowledge is available at the moment.

Classroom experiences show that even students who are finishing the last year of their training find it particularly challenging to express emotions effectively when reading aloud. Narratives and fairy tales include a very wide variety of emotions construed in the written text waiting to be brought to life orally by means of different suprasegmental and paralinguistic features. The first challenge that students face has to do, therefore, with the interpretation of the attitudes and emotions construed in the written text. This difficulty is then coupled with the need to associate those emotions with certain suprasegmental and paralinguistic features in oral language. Awareness of the association between the written expression of emotions and its oral realization constitutes a key skill in EFL education. Teachers require pedagogical tools to help students improve their *emotional speech* when reading aloud fairy tales. University teachers, therefore, are called to find appropriate means to help students overcome these difficulties. This is the context in which this study originates.

The aim of this thesis is to describe and explain the association between the written expression of emotions in fairy tales and its phonetic manifestation and to suggest pedagogical implications which might help EFL students to read aloud fairy tales more effectively.

² The word suprasegmental is used to describe those features that "extend over larger chunks of utterance than the single segment" (Cruttenden, 2008, p. 51). The term paralinguistic refers to those vocal features which are independent of pitch, loudness, and duration and are not a necessary component of speech. For the purpose of this study only the phonetic realization of these patterns is considered.

With this purpose in mind, the linguistic construal of the written expression of emotions is studied drawing on the APPRAISAL³ framework within systemic functional linguistics (hereafter, SFL) (Bednarek, 2008; Martin & White, 2005) as a theoretical point of departure. The oral manifestation of the expression of emotions is analysed and classified using an adaptation of the framework for the analysis of suprasegmental and paralinguistic features of *emotional speech* proposed by Roach, Stibbard, Osborne, Arnfield, and Setter (1998). Particular emphasis is placed throughout the thesis on the possible pedagogical implications that the findings obtained might have in the specific educational context of this study.

Section 2

Section 2 states the purpose of the study as well as the research questions, the hypotheses and the objectives underlying this investigation.

I.2.1 Aim of the study

The purpose of this study is to explore and explain an explicit association between the written and oral expression of emotions in fairy tales drawing upon the system of APPRAISAL – AFFECT and GRADUATION – and an adaptation of Roach et al.'s (1998) phonetic taxonomy. Based on the results obtained, pedagogical implications will be suggested for the teaching and learning of the expression of emotions when reading aloud fairy tales at university level EFL teacher training programs.

³ SMALL CAPS indicate the technical use of a term within SFL. APPRAISAL theory is dealt with in Section 1, Chapter II (*Theoretical Framework*).

The research questions postulated for this study are the following:

- 1. How does INSCRIBED AFFECT in the fairy tales analysed relate to the suprasegmental and paralinguistic features selected by the storyteller to express those emotions orally?
- 2. What is the association between the written semantics of intensification of INSCRIBED AFFECT and the phonetic variables of pitch height, pitch range, loudness and tempo?
- 3. What pedagogical implications can be derived from these findings for the teaching and learning of the expression of emotions when reading aloud fairy tales at university level EFL teacher training programs?

The previous research questions are associated to the following hypotheses and objectives:

I.2.3 Hypotheses

- There is a specific and stable relation that can be captured in terms of tendencies between INSCRIBED AFFECT in the fairy tales analysed and the suprasegmental and paralinguistic features selected by the expert storyteller to express those emotions orally.
- 2. The use of written semantic resources to intensify INSCRIBED AFFECT results in an intensified use of the typical phonetic values of pitch height, pitch range, loudness and tempo for the type of AFFECT analysed in the oral production.
- 3. The findings should render pedagogical implications to be considered for the teaching and learning of the expression of emotions when reading aloud fairy tales at university level EFL teacher training programs.

I.2.4 Objectives

- 1. To analyse INSCRIBED AFFECT as well as the phonetic features used by the expert storyteller to express those emotions orally in the selected corpus of fairy tales by means of qualitative and quantitative instruments:
 - a. Qualitative instruments: pre-established INSCRIBED AFFECT categories and perceptual⁴ values for a selected group of suprasegmental and paralinguistic variables.
 - b. Quantitative instruments: acoustic numerical measures of frequency⁵ (pitch height and pitch range), amplitude (loudness) and duration (tempo) as well as pitch direction images using PRAAT.
- 2. To establish an association between INSCRIBED AFFECT in the fairy tales selected and the suprasegmental and paralinguistic features chosen by the expert storyteller to express those emotions orally.
- 3. To find out whether there is a linear relationship between the use of written semantic resources to intensify INSCRIBED AFFECT and a corresponding intensification of the use of the typical phonetic values of pitch height, pitch range, loudness and tempo for the type of INSCRIBED AFFECT analysed.
- 4. To describe and support the pedagogical implications of the resulting association between the written realization of attitudinal meanings – AFFECT and GRADUATION – and its oral manifestation for the teaching and learning of the expression of emotions when reading aloud fairy tales at university level EFL teacher training programs.

⁴ The term 'perceptual' is used to refer to the auditory capacity human beings have to perceive suprasegmental and paralinguistic differences without the aid of specific computer software; the term 'acoustic' is used to describe numerical measures taken of suprasegmental features by means of computer tools such as PRAAT.

⁵ See Chapter II, Section 2, for an explanation of the relationship between the acoustic and perceptual terms (e.g. frequency and pitch).

Section 3

I.3 Overview of the chapters

This thesis consists of eight chapters, each organized in a different number of sections. Chapter I has presented the context and purpose of this thesis as well as the aim of the study, the research questions, the hypotheses, and the objectives underlying this study. Chapters II and III describe the relevant theoretical background and related research which constitute the foundation for this work. Chapter II, *Theoretical Framework*, includes a general explanation of APPRAISAL (Bednarek, 2008; Martin & White, 2005) and develops the phonetic framework for the analysis of the oral manifestations of emotions based on Roach et al.'s (1998) work. Chapter III, *Literature Review*, reports previous research on the written and oral expression of emotion as well as on cross-linguistic studies dealing with the teaching and learning of emotions.

Chapter IV, *Methodology*, describes the research design adopted in order to accomplish the aim of this study. It specifies the materials used and the procedures followed to classify the data. In brief, it presents the methodology observed.

Chapter V, *Results*, and Chapter VI, *Discussion*, are interconnected as the results reported on Chapter V are discussed in Chapter VI. The results presented and interpreted in these chapters refer to the first two research questions related to the association between the written and oral expression of emotions in fairy tales (research question 1), and the association between the written semantics of intensification and its phonetic realization (research question 2). Research question 3 refers to the possible pedagogical implications resulting from the findings; the answer to this question is presented in Chapter VII, *Pedagogical Implications*.

Finally, Chapter VIII, *Conclusions and Suggestions for Future Research*, states the main conclusions derived from this study as well as areas for further research.

CHAPTER II

THEORETICAL FRAMEWORK

This chapter presents the theoretical foundations for this study. As stated in Chapter I, the main purpose of this work is to examine the association between the written and oral expression of emotions in fairy tales. In order to explore this relation this study draws on the one hand, on the system of APPRAISAL – AFFECT and GRADUATION –, and on the other, on an adaptation of Roach et al.'s (1998) phonetic taxonomy. The driving force behind this thesis is educational and therefore the study also focuses on the pedagogical implications of the findings for the teaching and learning of the expression of emotions when reading aloud fairy tales at university level EFL teacher training. References to the connection between the theoretical notions explained and EFL contexts are specified along the chapter.

Chapter II is divided into three sections. The first section deals with the theoretical framework for the analysis of the written description of emotions. The second section describes the phonetic notions used for the analysis and description of the oral manifestation of emotions. Finally, a section describing the association between both is included.

Section 1

II.1 Theoretical framework for the written description of emotions

This section offers a summary of the theoretical framework adopted to analyse and describe the written expression of emotions in fairy tales⁶. The section begins with a description of the nursery tale as a type of narrative, one of the story genres following the classification proposed by Martin and Rose (2008). The role of evaluation in narratives and, therefore, in fairy tales is specified next. The chapter also includes a description of the lexicogrammatical realization of evaluation as proposed by APPRAISAL researchers. The

⁶ The terms 'fairy tale' and 'nursery tale' are used indistinctively hereafter.

expression of emotions as gradable evaluative meanings emerges as a key feature of narratives that is also referred to in this summary.

Nursery tales constitute a type of narrative genre, according to the classification proposed by Martin and Rose (2008). These authors define "genres as staged, goal oriented social processes" (Martin & Rose, 2008, p. 6). Within the great variety of everyday life genres present in English-speaking cultures the 'story' has been frequently foregrounded "as a highly valued social process in the life of the culture" (Rothery & Stenglin, 2000, p. 231). Martin and Rose describe stories as "central genres in all cultures... told in social groupings to interpret life's chaos and rhythms, to evaluate each other's behaviour, and to educate and entertain our children" (2008, p. 49).

Narratives and therefore fairy tales are members of the family of 'story' genres as they share a "generic pattern that resolves a complication" (Martin & Rose, 2008, p.52). To be precise, "the 'point' of the narrative is how the protagonists resolve a complication in their lives, once they have evaluated the complicating action with some type of attitude" (Martin & Rose, 2008, p. 67). Consequently, the identification and description of the resources that realize the expression of attitude and emotions are central to understand narratives and fairy tales.

Although it could be said that a story may present more than one message to a reader or even different messages to different readers, it is equally true to state that there is what Rothery and Stenglin call "a dominant reading of a message" (2000, p. 256). For purposes of analysis, the present study assumes that the generic structure of texts as well as their evaluative meanings suggest "an ideal reading, a position from which characters and events become intelligible, values shareable and the narrative itself coherent" (Macken-Horarik, 2003, p. 287). This preferred reading is not a haphazard affair, and "evaluation holds the key to unpacking the dominant message" of narratives (Rothery & Stenglin, 2000, p. 256). The system of APPRAISAL (Martin & White, 2005) offers a theoretical framework within SFL which, focusing on the interpersonal function of language, systematizes the great variety of linguistic resources deployed by users of the language to express attitudinal

meanings which "tend to spread out and colour a phase of discourse as speakers and writers take up a stance⁷" (Martin & White, 2005, p.43).

The present study focuses on how emotions are explicitly encoded and graduated in fairy tales. It adopts APPRAISAL theory as the main methodological tool for the description and classification of direct emotional aspects of evaluation (INSCRIBED AFFECT) and the gradability of those expressions (FORCE subsystem of GRADUATION). This chapter presents a brief description of APPRAISAL⁸ framework and elaborates on two of its key systems used for the analysis. The framework outlined here draws mainly on Martin and White's (2005) description of ATTITUDE and GRADUATION as well as on Bednarek's (2008) recent modifications of the AFFECT subsystem.

APPRAISAL is an interpersonal, discourse semantics system within SFL (Martin & White, 2005). It systematizes the interpersonal resources of evaluation, and includes three interacting domains: ATTITUDE, ENGAGEMENT and GRADUATION. ATTITUDE focuses on "feelings, including emotional reactions, judgements of behaviour and evaluation of things" (Martin & White, 2005, p. 35). The sourcing of ATTITUDE and the combination of different voices is described by ENGAGEMENT. GRADUATION covers the gradability – intensification of gradable lexis and adjustment of boundaries of non-gradable categories – of ATTITUDE.

The subsystem of ATTITUDE involves three semantic regions developed in three subsystems: AFFECT (the domain of emotions), JUDGEMENT (the domain of ethics) and APPRECIATION (the domain of aesthetics). As previously stated, the interest of this study relates to the domain of emotions and therefore a more detailed description of AFFECT is provided. Unless stated otherwise this description draws on Bednarek's (2008) work⁹.

AFFECT is characterized by a set of defining features of particular interest for the present study:

⁷ Stance is defined by Biber and Finegan (1989) as "the lexical and grammatical expression of attitudes, feelings, judgements or commitment concerning the propositional content of a message" (as cited in Eggins & Slade, 1997, p. 125).

⁸ See Martin & White (2005) for a full account of APPRAISAL theory.

⁹ See Bednarek (2008) for details on the new mapping of AFFECT and a comparison with Martin & White (2005).

- the inherent gradability of explicit attitudinal wordings;
- the positive, negative or neutral valence of attitudinal lexis;
- and its prosodic realization with its cumulative effect.

Within AFFECT, emotions can be grouped into five subsystems: un/happiness which is concerned with "affairs of the heart (Martin & White, 2005, p. 49); in/security which is related to "ecosocial wellbeing" (Martin & White, 2005, p. 49); dis/satisfaction which is concerned with the pursuit of goals; surprise which "overlaps with the linguistic domain of unexpectedness and sits on the border between emotion and cognition" (Macken-Horarik & Isaac, 2014, p. 71); and dis/inclination which refers to desire and non-desire. Bednarek (2008) establishes a possible connection between the five AFFECT types proposed in APPRAISAL and typical terms used to classify emotions outside the SFL tradition. Table 2.1 offers an adaptation of this connection.

Table 2.1

AFFECT type	typical emotions terms
un/happiness	
happiness: affection	'like, love, respect, pity'
unhappiness: antipathy	'hate, dislike, scorn'
happiness: cheer	'amusement, cheer, happiness'
unhappiness: misery	'sadness, guilt, disappointment, regret, grief'
in/security	
security: trust	'trust in someone or in a future happening'
insecurity: distrust	'distrust, reserve, suspicion'
security: quiet	'assurance, confidence, ease, safety, relaxation'
insecurity: disquiet	'fear, worry, anxiety, puzzlement, confusion, embarrassment'
dis/satisfaction	
satisfaction: interest	'interest in, fascination with, excitement, entertainment,
dissatisfaction: ennui	'boredom'
satisfaction: pleasure	'admiration, appeal, contentment, gratitude, being impressed, pleasure, pride'
dissatisfaction: displeasure	'anger, frustration, dissatisfaction'
dis/inclination	
desire	'wishes, willingness, volition'
non-desire	'reluctance, unwillingness, non-volition'
surprise	'surprise'

AFFECT types and typical emotions terms used outside the SFL tradition

Note: Adapted from Bednarek's (2008) classification.

As previously stated, one of the defining features of affect is the positive, negative or neutral valence of attitudinal wordings. This feature is reflected in the labels used to identify most of the different subtypes of AFFECT which use a negative prefix to lexicalize the possibility of adjudicating a negative value to attitude (e.g. unhappiness, insecurity) or no prefix for positively loaded lexis (e.g. happiness, security). The term 'surprise', however, implies a neutrally charged emotion which reflects a feeling that can be either judged as positive or negative depending on its surrounding context. The description of attitudes as positive, negative or neutral included in AFFECT subtypes' labels is analysed as valence¹⁰ in the present study following Bednarek's (2008) classification. Valence, therefore, refers to how attitudinal wordings express feelings and emotions that can be popularly construed by the culture as positive, negative or neutral.

Bednarek (2008) proposes a classification which incorporates fuzziness and prototypical categories providing a realistic categorization of affect. The idea of "a fuzzy system, with no clear boundaries between affect types, and possible blends" (Bednarek, 2008, p. 167) accounts for the possibility of classifying many borderline cases as combining or blending more than one emotion. The addition of the notion of prototypicality sets up a system of AFFECT which captures how some lexical items "are considered as marginal rather than prototypical examples of emotion terms by speakers" (Bednarek, 2008, p. 168).

AFFECT can be realized in varied ways. Martin and White (2005) propose two broad types of realization: INSCRIBED and INVOKED. INSCRIBED AFFECT encompasses all explicit attitudinal lexis present in the text. INSCRIBED AFFECT can be worded in different lexicogrammatical realizations such as terms denoting 'quality', 'process' or 'comment'. INVOKED AFFECT, on the other hand, goes beyond direct lexicogrammatical devices used to convey AFFECT and includes the selection of meanings that express evaluation indirectly through tokens that provoke or invite (flag or afford) affect¹¹.

¹⁰ Only positive vs negative valence was considered for this study. A distinction between negative and negated valence might be of great interest for future research, but it is left aside for the present work.

¹¹ See Martin & White (2005) for a full account on indirect realization strategies.

Bednarek (2008) uses "a strict dichotomy between signalling and denoting affect" (p. 12). This dichotomy reflects two ways in which language relates to emotion¹²: language about emotion (*emotion talk*) which comprises all those linguistic expressions that denote emotions; and language as emotion (*emotional talk*) which comprises verbal, non-verbal, linguistic and non-linguistic resources that conventionally signal emotions¹³. The focus of this study for the written description of the expression of emotion is mainly on emotion terms in fairy tales, thus it uses the phrases INSCRIBED AFFECT and *emotion talk* as referring to the same phenomenon. However, this work also describes some linguistic attitudinal instances which Bednarek places outside *emotion talk* and within *emotional talk* such as interjections. For the purpose of this study interjections are described as expressing emotions through wording as "outbursts of evaluation" (Martin & White 2005, p. 69).

In brief, the present study describes and analyses the linguistic written expression of emotion which can be directly identified in the lexis as a first step in the interpretation of emotions in texts¹⁴.

GRADUATION is concerned with "grading phenomena whereby feelings are amplified and categories blurred" (Martin & White, 2005, p. 35). It attends to "two axes of scalability" (Martin & White, 2005, p. 137). On the one hand, the subsystem of FOCUS has the effect of determining the strength of prototypicality of non-gradable resources defining core and peripheral or borderline types of attitude. On the other hand, FORCE deals with how speakers grade the intensity (intensification) or amount (quantification) of evaluation. In the case of attitude, "since the resources are inherently gradable, graduation has to do with adjusting the degree of an evaluation" (Martin & White, 2005, p. 37). This study focuses on GRADUATION: FORCE – intensification which can be realized by means of three modes: infused graders (inherently intense lexis); isolating graders (individual lexemes with a grading function); and repetition (at word, sentence or text levels). Moreover, intensification might be realized so as to up-scale or down-scale qualities and processes.

¹² Refer to Bednarek (2008, p. 12) for a more detailed explanation.

¹³ See Section 3 in this chapter for an explanation on the association this study suggests between *emotion talk* and *emotional talk*.

¹⁴ Further research could be carried out focusing on all realizations of INVOKED AFFECT as well.

The attitudinal meanings that propositions carry, even when they are inscribed, their valence and their gradability force are affected by the language choices of the surrounding text as well as by the cultural context. So meaning making is about more than looking at the particular value that a discrete linguistic element has. It entails going "beyond the text itself, [where] there is the larger space of the culture with its highly charged icons and unspoken shared values that carry their own evaluative freight into the text" (Macken-Horarik & Isaac, 2014, p. 89). The importance of context for meaning making does not override the significance of co-text; the combination of both is essential for a more comprehensive interpretation of attitude. In some cases co-text or context may help to uncover attitudinal meaning more clearly. This is the case of the valence of expressions such as [surprise]¹⁵, which being neutral in nature depends more on co-text than on cultural context to be classified as having positive or negative valence (Macken-Horarik & Isaac, 2014, p. 72).

The interpretation and description of attitudinal meanings in the written fairy tales studied in this thesis are based on the previously explained theoretical foundations. Different strata are considered in this study moving from genre (culture), to content (semantics and lexicogrammar), to expression (phonology and phonetics) as the storyteller's oral rendering becomes an additional source of meaning to interpret affect. This type of multimodal research on interprets and EFL where a detailed description of language enables English users, non-natives in this context, to engage more effectively with the language (Halliday & Webster, 2009).

Section 2 reviews the theoretical guidelines which are followed for the description of *emotional speech*, that is, the oral manifestation of emotions by means of suprasegmental and paralinguistic features.

¹⁵ Square brackets [] are used to show the use of terms as AFFECT subtypes labels.

Section 2

II.2 Phonetic taxonomy used for the oral manifestation of emotions

This section covers the theoretical foundations used for the analysis and description of *emotional speech* in the oral versions of the fairy tales included in this thesis. Thus the analysis is located within the SFL stratum of expression of phonology and phonetics. This section also presents a description of the suprasegmental¹⁶ and paralinguistic features considered relevant for the interpretation of *emotional speech*.

Storytelling "is a distinct art governed by distinct principles because the life of the story must be transmitted and rendered into voice" (Kready, 1916, p. 90). Having originated in the oral tradition, fairy tales are mainly written to be told or read aloud and this fact emphasizes the importance of phonetic and phonological resources for the expression of the typical attitudinal content foregrounded in stories. This study focuses on the phonetic realization of a range of phonological choices – loudness, pitch movement and voice quality – Martin and White (2005) point out as relevant for the realization of interpersonal semantics. In addition, this thesis complements the resources suggested by these authors with a wider range of phonetic features used for the description of the emotive function of speech by Roach et al. (1998).

The study of the oral expression of emotions also known as *emotional speech* (Roach et al., 1998), *vocal expression of affect* (Juslin & Scherer, 2005) and *vocal cues to affect* (Pavlenko, 2007) "is a multidisciplinary research field with contributions coming from psychology, acoustics, speech science, linguistics, medicine, engineering, and computer science" (Juslin & Scherer, 2005, p. 67). For the purpose of this thesis, work from speech science, linguistics and computer science vas considered relevant and reported in Chapter III¹⁷.

¹⁶ As stated in Chapter I, the term 'suprasegmental' is used in this thesis to refer to those features usually analysed as 'prosodic'. The terms 'prosody' and 'prosodic' are reserved for SFL in which they are used to refer to the realization structure of interpersonal meanings.

¹⁷ For a more comprehensive account on *emotional speech*, see Cowie, Campbell, Cowie & Roach (2003); Juslin & Scherer (2005), Pavlenko (2007); Schuller, Batliner, Steidl & Seppi (2011).

There is general agreement on the fact that changes in the voice can indicate affective meaning, but also on the many challenges faced when a systematic description of those cues is attempted. Regardless of the difficulties, the urge to address research shortcomings is growing, especially in foreign language contexts where problems interpreting and producing emotions may be intensified by cross-linguistic differences, L2 proficiency, and lack of awareness of suprasegmental and paralinguistic features, among others (Pavlenko, 2007). This thesis attempts to contribute to the existing research related to EFL contexts combining theoretical foundations coming from linguistics, SFL to be precise (developed in Section 1), and phonetics (discussed next).

According to Roach et al. (1998) "in speaking we convey to our listeners information about our emotional state, and about our attitude both to our listeners and to what we are saying" (p. 83). Even though Roach et al.'s transcription system had a computational objective, its phonetic taxonomy serves the purposes of this study as it provides a tested set of features for the analysis of *emotional speech*¹⁸. Moreover, the framework is particularly appropriate as it proposes "to build a bridge between the human perceptual experience and the measurable properties of the acoustic signal by developing an analytic framework based partly on auditory analysis" (Roach, 2000, p. 53). The inclusion of a perceptual analysis makes the framework apposite to a research with teaching implications such as this one because it considers the fact that humans can reliably recognize and produce *emotional speech* without the aid of acoustic correlates (Juslin & Scherer, 2005; Roach, 2000).

For the purpose of this study, the phonetic features considered as relevant for a description of *emotional speech* have been divided into suprasegmental and paralinguistic features following Roach et al.'s (1998) taxonomy. Vocal cues to affect may be described at different levels:

1. the *physiological* level (e.g. describing nerve impulses or muscle innervation patterns...); 2. the *phonatory-articulatory* level (e.g. describing the position or

¹⁸ There are no publications reporting findings coming from Roach et al.'s (1998) work. The data collected "was not good enough" and results were not many in number (P. Roach, personal communication, August 30, 2015).

movement of the major structures involved...); 3. the *acoustic* level (e.g. describing characteristics of the speech wave form) [*italics* in the original]. (Juslin & Scherer, 2005, p. 87).

Two major types of segmentation for the speech samples may be adopted to analyse spoken language: physical segmentation, when patterns of events or sound energy distribution are followed to determine boundaries; and perceptual segmentation, which "requires that the human information-processing system demarcates segments on the basis of prior categorization" (Juslin & Scherer, 2005, pp. 99-100). This study describes *emotional speech* at the acoustic level by means of a perceptual segmentation.

The distinction between suprasegmental and paralinguistic features is a wellestablished problem in the fields of phonetics and phonology. As Roach et al. (1998) explain:

the study of paralinguistic features in speech lacks a well-defined framework, leaving disagreement in the literature about the dividing lines between paralinguistic and prosodic¹⁹ features (see for example Brown, 1990; Ladd, 1996; Cruttenden, 1997)²⁰. However, Crystal (1969: 128) makes a useful distinction on phonetic and functional grounds between prosodic features on the one hand, these being characterised by variations in pitch, loudness, duration, and silence, and paralinguistic features on the other hand, being vocal but independent of pitch, loudness, and duration for their identification. While prosodic features are a necessary component of all speech, paralinguistic features may be absent, and allow for more idiosyncrasy in their realisation. (pp. 84-85)

The distinction between suprasegmental and paralinguistic features adopted in this study follows Roach et al.'s (1998).

Another issue related to the suprasegmental and paralinguistic features analysed in this thesis is their linguistic (phonological) or para/non-linguistic (phonetic) status. This topic has been well-described by Ladd (2008). Ladd proposes an unproblematic relation between linguistic and paralinguistic features for the most part. The author explains that "the paralinguistic signals represent a parallel channel, or channels, of information, and do

¹⁹ The term 'prosodic' is used in this quote meaning 'suprasegmental'.

²⁰ See also Ladd (2008); Cruttenden (2008).

not for the most part alter or obscure the identity of the linguistic elements" (Ladd, 2008, p. 34). The present study adopts Ladd's position as regards this matter.

The framework suggested for the analysis of the oral realization of emotion in the fairy tales studied in this thesis constitutes "a system for recording characteristics of *emotional speech* as entirely a phonetic exercise" (Roach, 2000, p. 55). It is not concerned with the linguistic phonological status that can be adjudicated to some of the variables studied such as pitch direction and pitch height.

The phonetic taxonomy applied in the present study for the description of the oral expression of emotions consists of seven suprasegmental features and three groups of paralinguistic effects which are considered as relevant by Roach et al. (1998)²¹. The following is a definition of these features which constitute the phonetic variables analysed in order to describe the association between the written and oral expression of emotion in the fairy tales selected:

- Suprasegmental features: pitch height, pitch range, pitch direction, loudness, tempo, articulatory precision and the use of pause corroborated by acoustic measures of frequency (pitch), amplitude (loudness) and duration (tempo and pause).
 - i. *Pitch height* or level refers to the perception of the acoustic phenomenon of frequency (measured in Hertz Hz). Cruttenden (2008) describes the relationship between frequency and pitch as a correlation in which "the higher the glottal fundamental frequency, the higher our impression of pitch" (p. 21). Pitch height depends on the rate of vibration of the vocal cords the faster the vocal cords vibrate, the higher the perception of pitch is. Although the pitch level of voices varies greatly from one speaker to the next, Fant (1956) states that "a male voice may have an average pitch level of about 120 Hz and a female voice a level in the region of 220 Hz" (as cited in Cruttenden, 2008, p. 21). The terms *high, mid* and *low* are used to classify pitch height perceptually in the present study.

²¹ Methodological decisions as regards the perceptual and acoustic analysis are explained in Chapter IV, Section IV.2.2.

- ii. *Pitch range* or span refers to the width of range used for the tone movement the speaker produces. Intonation phrases or tone units are normally positioned in the lower third of a speaker's voice range (Cruttenden, 1997). Deviations from this norm, labelled as *wide* or *narrow* in this study, are usually perceived as signalling emotion.
- iii. *Pitch direction* is defined as the most prominent movement in a tone unit. Five movements are identified as relevant: fall, rise-fall, rise, fall-rise and level.
- iv. *Loudness* describes the relative perceptual sensation resulting from the strength used at the production stage which is acoustically read in the amplitude of the vibration (measured in Decibels dB)²². Cruttenden defines this phenomenon as "an increase in amplitude of vibration, with its resultant impression of greater loudness, is brought about by an increase in air pressure from the lungs" (2008, p. 22). Loudness is perceptually classified as *loud, moderate* and *soft* in the present study.
- *Tempo* also called rate of articulation refers to the overall speed of delivery and it "has two different manifestations according to whether it is perceived over polysyllabic stretches or on single syllables" (Roach, 2000, p. 56). Different units of analysis may be used to establish the rate of speech on polysyllabic stretches. Cruttenden (2008) suggests that "an average rate of delivery might contain anything from about 6 to 20 sounds per second" (p. 23). Arnfield, Roach, Setter, Greasley and Horton (1995), however, classify tempo considering the number of syllables per second. The present study takes the classification proposed by Arnfield et al. *slow*: 3.3 syllables per second; medium (labelled *moderate* in the present study): 4.3; and *fast*: 5.9 as point of reference. Tempo on the individual syllables is measured considering how long the syllable is in seconds, and perceptually it is classified as *clipped* when syllables sound as uttered in a hurry, reducing the quality of sounds; *unmarked*; or *drawled* when uttered slowly and with extended voiced sounds.

²² Even though the term 'intensity' would be the most appropriate one to label the acoustic analysis, the word 'amplitude' is used throughout this thesis. The word 'intensity' is used to refer to lexical intensification.

- vi. *Precision of articulation* is also referred to as tension in the articulation of sounds in the field. Although speech is a continuum of sound with no pauses between words as written spaces would indicate, the degree of linking at word boundary depends on the formality of the speech register. The relationship between precision of articulation and formality suggests that "the more formal and careful (and probably slower) the delivery, the greater the tendency to preserve a form nearer to that of the isolate word" (Cruttenden, 2008, p. 294). *Precise* articulation, therefore, respects to a greater degree the individual qualities of sounds in words, whereas *slurred* articulation manifests greater influence and assimilation of sounds at word boundaries as well as other changes in sounds in connected speech (Cruttenden, 2008). For the sake of the present study, *precise* and *slurred* articulations are considered extremes on a continuum with an *unmarked* point in between.
- vii. *Pause* refers to tone unit boundaries and it is considered to be significant if/when pauses occur at odds with grammatical boundaries. The speaker's norm is taken as point of reference for the identification of any significantly extended pause. Acoustically, pause "refers to silent periods in an utterance and is usually measured in terms of absence of energy in the acoustic wave form" (Juslin & Scherer, 2005, p. 103).
- Paralinguistic features: voice quality, vocal effects and voice qualifications.
 - i. *Voice quality* or timbre of the voice is considered to be the main paralinguistic feature in the vocal differentiation of emotions (Pavlenko, 2007). Differences in voice quality are due to differences in the mode of phonation, the voice setting which is determined by a combination of the "overall posture of the vocal organs for speech, tenseness, the degree to which the lips are used in pronunciation, and so forth" (Pavlenko, 2007, p. 49). The diverse use of terms available to describe voice quality has led to an idiosyncratic use of concepts which results in rare assessment of reliability (Juslin & Scherer, 2005). Nevertheless, the National Center for Voice and Speech (http://ncvs.org) offers a tutorial on voice qualities describing the perceptual and physiologic component of different labels used to refer to this feature. This website as well as Cruttenden (2008) has been used as reference for

description of labels in this study. This section assumes a basic knowledge of articulatory phonetics²³.

- 1. Falsetto occurs when the voice setting is higher than the normal range; it is usually described as "girly voice". It shows apparent effort of production.
- 2. Creak or creaky voice sounds like the rubbing of two hard surfaces one against the other as there is a complex pattern of vibration in the vocal folds.
- 3. Whisper accounts for the sound created due to the passage of turbulent glottal airflow through the larynx in the absence of vocal fold vibration.
- 4. Rough voice is perceived as an unsteady, uneven, bumpy sound which persists over a long stretch of time as the vocal fold vibration mode is unsynchronized.
- 5. Breathy voice is described as having an apparent sound of air. It is caused by loose activation of the laryngeal muscles and a noise caused by air going through the larynx with turbulence in or near the glottis.
- 6. Ingressive voice quality is characterized by the sound produced as air is audibly inhaled. Cruttenden (2008) explains that it may be used when speakers experience lack of breath, have no "time to pause, either because the need for communication is pressing or because [they] do not wish someone else to have a chance to speak" (p.30).
- 7. Nasal voice quality is produced when the nasal tract couples with excessive acoustic energy.
- 8. Ventricular voice is a very rough type of voice caused by the use of false folds anterior instead of the vocal folds.
- 9. Glottal attack or glottalized voice quality is characterized by a clicking noise which is produced by a forceful abduction of the vocal folds during speech. In English it is clearly audible when it occurs before vowels.

²³ The unfamiliar reader is referred to Cruttenden (2008), Roach (2009), among others.

- ii. *Vocal effects* occur at intermittent points in speech. Roach et al. (1998) describe these effects as fluid control and respiratory reflexes which may be voluntarily or involuntarily used to indicate a particular emotional state. The labels suggested for these reflexes are self-explanatory and do not need further description: clear-throat, sniff, gulp, click, breath-in, breath-out and breath.
- iii. Voice qualifications are defined by Roach et al. (1998) as "non-linguistic vocal effects running through or interrupting speech" (p.85). Four labels are proposed: laugh, tremulous (affected by trembling or tremors), cry and yawn.

In sum, this section has described and explained the phonetic taxonomy employed to label the oral realization of emotion in the selected fairy tales. The framework suggested in this thesis contains a detailed classification of suprasegmental and paralinguistic features which could be used to signal emotion; not all these features, however, were observed in the samples studied. A summary of theoretical remarks involving the impact of the association between the written and oral expression of emotions is presented next.

Section 3

II.3 Association between written – linguistic – and oral – paralinguistic – expression of emotion

Different scholars have established the connection between the linguistic and the non-linguistic or paralinguistic areas of language. As stated in the introductory chapter, the present study focuses on the written linguistic expression of emotion and its phonetic non-linguistic realization.

The relationship between written linguistic expressions denoting emotion – emotion terms classified as *emotion talk* – and the oral manifestation of those emotions by means of conventional signals –some of the resources considered as *emotional talk* – is implied by Bednarek (2008). As can be seen in Figure 2.1, this area of contact and association between *emotion talk* and *emotional talk* could be located in the intersection between the two bubbles.



Figure 2.1 Relationship between emotion talk and emotional talk. Adapted from Bednarek (2008, p. 12).

The present study describes the association between the written and oral expression of emotion, focusing in the area where *emotion talk* and *emotional talk* intersect. Crystal (1975) highlights the importance of such association when he states that "understanding man's expressive potential requires the concurrent study of both linguistic and nonlinguistic modes of behaviour. Only a distorted picture can result from too rigid a separation between them" (p. 162).

More recently, Ladd (2008) clearly explains this association between the linguistic and non-linguistic – paralinguistic in his words – aspects of the resources used to express emotions:

The central difference between paralinguistic and linguistic messages resides in the *quantal* or *categorical* structure of linguistic signalling, and the *scalar* or *gradient* [*italics* on the original] nature of paralanguage. In linguistic signalling, physical continua are partitioned into categories, so that close similarity of phonetic form is generally of no relevance for meaning.... In paralinguistic signalling, by contrast, semantic continua are matched by phonetic ones. If raising the voice can be used to signal anger or surprise, raising the voice a lot can signal violent anger or great surprise. (p. 37)

Ladd's explanation of the difference and relationship between the linguistic and paralinguistic (non-linguistic) signaling of semantic meanings is enlarged by the notion of coupling. Ladd adds the idea that "by coupling paralinguistic cues to individual words or

phrases, we can achieve a level of expressiveness that transcends the signalling power of either words or paralanguage functioning separately" (2008, p. 38).

In this way, the value of a study that combines the theoretical foundations of linguistic and non-linguistic levels of analysis is foregrounded. The present study emphasizes the importance of associating the strata of written content and oral expression as a synergy where the analysis of content and expression together renders the understanding of interpersonal meanings more tangible and significantly richer, especially for non-native speakers of English.

Chapter II has described the theoretical frameworks this study is drawing upon to describe and explore the association between the written and oral expression of emotions in fairy tales:

- The framework of APPRAISAL for the analysis of the written linguistic expression of emotions (Section 1);
- A phonetic taxonomy adapted from Roach et al. (1998) specifically designed for the analysis of the oral non-linguistic expression of emotions in educational contexts (Section 2).

The significance of the exploration of the association between the written linguistic and oral non-linguistic expression of emotion has also been theoretically supported in this chapter.

Chapter III, *Literature Review*, which follows, reports previous research related to the theoretical foundations described in the present chapter.

CHAPTER III

LITERATURE REVIEW

The relation between the written and oral expression of emotions in fairy tales has entailed a revision of literature from different fields. Hence this chapter has been divided into two main sections: a first one including work done on the written mode of expression, and a second one describing work done on the oral mode.

Section 1 starts with a review of previous contributions on the topic of narratives and fairy tales as a genre. Then, 'evaluation' as a defining stage in narratives is explored as well as the presence of evaluative language as a key feature in narratives and fairy tales in particular. Last, the written expression of emotions and APPRAISAL as a tool for its analysis is reviewed.

Section 2 is devoted to studies conducted on the oral expression of emotion. First it is explored within the narrative genre. Then, especial attention is given to studies within SFL tradition that are related to the relevance of the oral expression of affect. Next, computational linguistic and speech synthesis research on *emotional speech* is reviewed as an essential contribution to the present study. Finally, work on the teaching and learning of the oral expression of emotions in EFL teacher training at university level is reported.

Section 1

III.1 Written expression of emotions in narratives and fairy tales (evaluation)

This first group of studies reviewed present contributions as regards narratives as a genre and its generic structure. Most research on narratives within the SFL tradition takes Labov and Waletzky's (1967) and Labov's (1972) work as points of departure.
Labov and Waletzky (1967) base their research on what they consider to be the simplest and most fundamental narrative structures: oral versions of personal experience in English. Using a fairy large body of data as corpus of study, they define the narrative genre, identify its basic units and outline the prototypical structure of the narrative as follows: Orientation, Complication, Evaluation, Resolution and Coda. Moreover, they relate formal properties of narrative units to their experiential and evaluative functions.

Labov (1972) concentrates on the linguistic resources used to evaluate experience within Black English vernacular culture by 3 different age groups. The author elaborates on Labov and Waletzky's (1967) narrative structure not only by adding an initial section –the Abstract– but also by considering the use of a wider range of evaluative devices and their development with age. Labov and Waletzky's (1967) and Labov's (1972) work main contribution to the present study lies on the definition of Evaluation as a narrative stage and on the description of evaluative devices as key features of narratives.

It is, nevertheless, Hasan (1996) who after studying "such anthologies as Grimm's, Jacob's, Aesop's and more recent tales for children" (p. 54), provides a detailed description and analysis of the nursery tale as a genre, the focus of this study. Additionally, she develops the Generic Structure Potential (GSP) of nursery tales describing its variant and invariant properties as follows:



Figure 3.1 GSP of the nursery tale²⁴. Hasan, 1996, p.54)

²⁴ "The round brackets in the above representation enclose elements which are optional.... The elements NOT enclosed in round brackets are obligatory.... The angled brackets enclose elements whose lexicogrammatical realization may be included or interspersed with the lexicogrammatical realization of some other element(s). The raised dot • between elements refers to the fact that the order of the elements on the two sides of the dot is reversible, while the carat sign f indicates relative fixity: the element to the right of the carat sign cannot precede the element on the left of the sign. Since mobile elements in a square bracket. ... The curved arrow appended to some element(s) ... symbolizes the possibility of iteration for that element. " (Hasan, 1996, pp. 54-55)

In addition, she studies in depth the crucial realization features associated with the first element: Placement. Hasan's work on the GSP of nursery tales is a fundamental pillar for the present study as it proposes important notions for genre analysis in general and also a detailed description of fairy tales, the genre that is the object of this study.

There seems to be wide agreement among authors on the importance of Evaluation in narrative genres as a stage which is realized by means of evaluative meanings discretely placed or interspersed in the text (Labov, 1972, p. 366; Labov & Waletzky, 1967, p. 35; Martin & Plum, 1997, pp. 303-304; Rothery & Stenglin, 2000, p. 231). Labov and Waletzky's (1967) cornerstone paper establishes the main function of Evaluation as that of revealing "the attitude of the narrator towards the narrative" (p. 37). Even though they mention the fact that the Evaluation section may be fused with the Resolution section, they associate evaluative meanings mainly to the stage of Evaluation. Labov's later work in 1972 introduces the interspersed nature of evaluation describing different evaluative devices which may be found in various forms throughout narratives (1972, p. 369).

Numerous studies have been carried out within the SFL tradition in relation to evaluative language in narratives. Martin and Plum's (1997) research on elicited narratives gives the positioning and nature of evaluative language a central role in the reclassification of texts narrating a sequence of events and thus typically classified as falling within the narrative genres. Along these lines, Rothery and Stenglin (2000) study the generic structure of narrative and explore the different ways that Evaluation functions in other story genres.

Martin and Rose's (2008) work on genre relations "document to some extent the explorations of genre undertaken by the so called Sydney School, both theoretically and descriptively" (p. 42). They describe the function and structure of narratives and elaborate on Labov and Waletzky's (1967) idea of a dominating Evaluation stage in narratives describing the scope of evaluation as affecting the narrative both backwards and forward. In an earlier study, Fries (1985), focuses on the role of overt and implicit evaluation in stories. He suggests that a certain type of evaluation (positive or negative) is heavily presented at the beginning of the story and then followed up and emphasized in the rest of the tale by means of different evaluative devices (Fries, 1985, p. 305).

As can be seen, the work done on evaluative language and thus on the expression of emotions within narrative texts has focused mainly on its function and contribution to the narrative generic structure. As helpful as these studies are for the purpose of this study, the work done refers mainly to the written realization of interpersonal meanings. The literature reviewed up to this point defines the genre which is the object of study of this investigation – fairy tales – and establishes the undeniable presence and importance of emotions as a constitutive element of fairy tales.

Drawing on SFL background, Martin and White (2005) develop and refine the APPRAISAL framework²⁵ for the analysis of evaluative language. They offer a delicate framework for the analysis of the semantics of evaluative language and of the lexicogrammatical resources used to convey or activate positive or negative interpersonal meanings explicitly or implicitly. Martin and White's most relevant contributions for the present study are the systems of ATTITUDE (subsystem of AFFECT) and GRADUATION. AFFECT maps emotions as systems of oppositions grouping them within three main categories: un/happiness, in/security and dis/satisfaction; and GRADUATION deals with the gradability of feelings²⁶.

Most significantly for the purpose of this study is Bednarek (2008) who combines corpus study and AFFECT to examine and profile *emotion talk*²⁷ in four different registers: conversation, news reportage, fiction and academic discourse. As a result of her work, she sets up a viable framework for research into *emotion talk*. Bednarek also establishes emotion profiles using "a modified version of appraisal theory which is developed with the help of corpus linguistic data and insights from cognitive linguistics/psychology" (2008, p. 18). Bednarek suggests some modifications to the subsystem of AFFECT as proposed by Martin and White (2005). The author classifies "emotion terms according to five rather than three categories" (Bednarek, 2008, p. 167): un/happiness, dis/satisfaction, in/security, dis/inclination, and surprise. She also re-construes the systems of in/security and dis/satisfaction. Apart from Bednarek's description of the written linguistic expression of

²⁵ Previous work on APPRAISAL includes that of Eggins and Slade (1997), for example.

²⁶ A detailed description of the APPRAISAL framework is presented in Chapter II, *Theoretical Framework*.

²⁷ That is 'all those expressions in the dictionary that denote affect/emotion' (Bednarek, 2008, p. 11).

emotion, the author suggests an intersecting area between *emotion talk* and *emotional* $talk^{28}$. This connection between the different linguistic and non-linguistic resources available for speakers to denote and signal emotion is central for the present study.

Martin and White's (2005) notion of intensification of qualities and processes²⁹ is also explored in previous work by Poynton (1996) and Eggins and Slade (1997). Poynton 's research on spoken data containing grammatical resources for vocation in Australian English describes the phenomenon of "amplification as an expressive resource – ways of 'speaking louder' which include a range of phonological features, together with forms of iteration and intensification at all grammatical ranks" (p. 213). She elaborates an account of these resources based on nominal groups which she defines as strongly expressive spoken data. Even though Poynton's work specifies the use of phonological features as a resource for intensification, the author does not explore the association of these resources to the lexicogrammatical ones. Eggins and Slade propose the category of "amplification" to capture "the lexical resources speakers can draw on to grade their attitudes towards people, things or events" (1997, p. 133).

As already stated in Chapter II, the present study draws mainly on Bednarek's classification of INSCRIBED AFFECT for the descriptive categories assigned to emotion terms and on Martin and White's (2005) description of GRADUATION.

The following group of studies concentrate on the use of APPRAISAL (Martin & White, 2005) as an effective linguistic tool to describe and explain how language resources encode attitudes and emotions (Bednarek, 2008; Macken-Horarik, 2003; Macken-Horarik & Isaac, 2014; Martin & Rose, 2008; Page, 2003; Zappavigna, Cléirigh, Dwyer & Martin, 2010). Page (2003) uses the APPRAISAL framework to analyse women and men's oral childbirth narratives elicited in an informal interview. The author focuses her analysis on the subsystems of AFFECT and APPRECIATION to describe the speakers' different story-telling styles and on JUDGEMENT to understand the speakers' self-characterization considering gender as the main variable. Macken-Horarik (2003) presents a linguistic

²⁸ See Chapter II, Section 3 for the theoretical bases of this association.

²⁹ See Chapter II, Section 1 for a theoretical description of GRADUATION.

analysis of a short written narrative used in Australian formal English examinations in order to elicit interpretative responses from sixteen-year-old Australian students as well as two successful written responses to this. The author draws on the APPRAISAL systems of AFFECT and JUDGMENT to uncover some of the mechanisms that "contribute to the creation of a text axiology in ideal readers" (p. 285). Martin and Rose (2008), in their book "*Genre Relations Mapping Cultures*" use the system of APPRAISAL to analyse the construction of characters and atmospheres in narratives as well as in other genres. In a multimodal text analysis, Zappavigna et al. (2010) combine textual (by means of the APPRAISAL system of ATTITUDE), phonological and gestural evidence to analyse the prosodic structure of the discourse of an Ethnic Liaison Officer. The phonological evidence presented in this study supports the fact that evaluative meanings are emphasized by means of stress and tone choices; no reference is made, however, to phonetic resources such as pitch height and range, tempo, pause and paralinguistic features which are dealt with in the present work.

In a recent study, Macken-Horarik and Isaac (2014) explore the issue of students' reading and interpretation of evaluation in narratives reviewing two APPRAISAL systems (ATTITUDE and GRADUATION). Moreover, the authors propose a methodology for analysis using APPRAISAL in an attempt "to engage with the indeterminacy at the heart of evaluation in texts." (p. 85). The comprehensive multi-layered methodology of analysis suggested by Macken-Horarik and Isaac includes not only the analysis of explicit cues of ATTITUDE and GRADUATION but also a cline of resources tackling the most implicit notion of culture as an evaluation source of interpretation. The present study acknowledges the importance and necessity of dealing with all levels of implicitness but only focuses on the most explicit level of the cline: the word. The analysis of the remaining levels of implicitness and their phonetic realization might be an interesting area of future research.

The review of the available literature shows that even though the studies reported constitute useful examples of analysis of the expression of emotions in narratives, no detailed reference is made to the phonetic manifestation of those emotions or to a possible systematic association between the written and oral expression of emotions.

Bearing in mind the review of studies presented above, the corpus analysed in the present study can be positioned as part of the group of narrative texts Hasan (1996) defines

as fairy tales. The focus of analysis are interpersonal meanings, more particularly those Martin and White (2005) and Bednarek (2008) classify as expression of INSCRIBED AFFECT and how they are mitigated or amplified – GRADUATION (Eggins & Slade, 1997; Macken-Horarik & Isaac, 2014; Martin & White, 2005; Poynton, 1996).

Section 2

III.2 Oral expression of emotions – emotional speech

The following group of studies is considered key work related to the expression of emotion in human speech by means of suprasegmental and paralinguistic features. The first group of studies reviewed below makes reference to the oral realization of emotion in relation to evaluation, especially in the context of the narrative genre. The second group describes publications done within the field of computational linguistics and speech synthesis. And the last group includes work on the teaching and acquisition of *emotional speech* in EFL contexts, especially in Argentina.

Labov's (1972) research on narratives of personal experience incorporates expressive phonology to a set of intensifiers within the category of evaluative elements in spoken narratives. Oral devices such as onomatopoeia and lengthening of vowels are considered to be conventional modes to intensify or emphasize certain events in narratives (Labov, 1972). Eggins and Slade (1997) include the use of stress as a suprasegmental feature amplifying the force of the evaluation encoded in the stressed "lexical item which may or may not already express attitudinal meaning." (p. 134).

Hasan (1989) referring specifically to verbal art and thus literary works such as fairy tales, highlights the close systematic relation between meanings, wording and sound. She explains how "meanings become accessible through wording; and wording becomes accessible through sound" in such a systematic relationship that "sound itself has no significance unless it is paired with meaning" in the stratum of wording (p. 96). Moreover, and most importantly for the present study, Hasan (1996) points out the idea of a potential association between the written and oral expression of emotion. The author anticipates the connection and possible relationship between lexicogrammatical, and suprasegmental and

paralinguistic choices but focuses her analysis on the written resources. Martin and White (2005), as well, state how this possible association gains even more importance once the APPRAISAL systems are used in the analysis of evaluation, as the present study intends to show.

In a cross-linguistic study, Estebas-Vilaplana (2014) demonstrates "that evaluation permeates the phonological level of linguistic analysis" (p. 191). Estebas-Vilaplana designs a perception test used by native hearers of English and Spanish to evaluate different versions of the word mandarins/mandarinas which were manipulated with respect to their fundamental frequency (pitch range). The study looks into how interlocutors of English and Spanish cultural backgrounds perceive and evaluate the degree of politeness of utterances which differ as regards their pitch range. This study is of particular interest for the present work as it examines the effects of pitch range variability, one of the phonetic variables considered here, in the perception of politeness of native speakers of English and Spanish.

Another important group of studies combine the work of well-known phoneticians and computational linguists. Different authors have focused on the possible correlation between the linguistic expression of certain emotions and attitudes and its oral realization by means of specific phonetic parameters (Douglas-Cowie, Campbell, Cowie & Roach, 2003; Juslin & Scherer 2005; Roach, 2000; Roach et al., 1998; Schuller, Batliner, Steidl & Seppi, 2011). Among these studies, the most significant ones for this thesis are those carried out by Roach et al. (1998) and Roach (2000). These authors' research work resulted in *The Reading-Leeds database* which consists of natural emotional speech recorded mainly from UK television and radio programmes and considered to be applicable and reliable by the computational linguistic scientific community (Douglas-Cowie et al., 2003).

The applicability and reliability of the taxonomy for the analysis of *emotional speech* proposed by Roach et al. (1998) and Roach (2000) is one of the reasons why it is a fundamental part of the theoretical framework for this thesis³⁰. Moreover, the fact that their analytical framework aims at building "a bridge between the human perceptual experience

³⁰ A detailed description of the framework has been presented in Chapter II, *Theoretical Framework*.

and the measurable properties of the acoustic signal" (Roach, 2000, p. 53) is of paramount importance for the present study. This thesis has a pedagogical rather than a computational purpose and thus the framework proposed for the analysis and description of the samples requires the use of analytical tools which are accessible to students and teachers who are not necessarily trained in phonetic computer software.

Stibbard (2000) strengthens this point by signalling the necessity to pay attention not only to conventional acoustic features but also to other single or combined perceptual cues that the human ear perceives as relevant to the expression of emotion in speech. The present work focuses mainly on the perceptual description of *emotional speech* using measurable variables to corroborate results. Another important reason for adopting Roach et al.'s taxonomy is the fact that, although it falls outside the SFL tradition, it can be articulated unproblematically with an analysis of the written realization of emotion drawing upon APPRAISAL.

In addition, it is essential to mention some other published work developed on *emotional speech* within computational linguistics and speech synthesis which is of great value for the present research. This selection of papers does not intend to be exhaustive but to outline the progress accomplished in the last decades in the area. Juslin and Scherer (2005) have described and analysed most literature on the oral expression of emotions in a valuable chapter of the book *"The New Handbook of Methods in Nonverbal Behavior Research"*. These authors review investigations on the vocal expression of affect and analyse methodological issues of great impact on reliability and replicability. Moreover, they confirm a fundamental assumption for this study: they present a great number of research papers which prove the existing relation between certain parameters of oral expression and different emotional states in particular contexts of communication. Schuller et al. (2011) complete Juslin and Scherer's review adding more recent studies which propose improved research paths.

A constant feature of the studies reviewed is the lack of consensus on the way they conceive and label emotions. There is considerable disagreement not only on how to conceptualize emotion but also on the name tags proposed to label different emotions. The present study tries to overcome these differences by analysing the written expression of emotion from a SFL perspective using APPRAISAL descriptive categories for *emotion talk* in the specific context of fairy tales in English. APPRAISAL labels are well-established in the linguistic community as a reliable analytical tool which has been tested by wide range of researchers (some of this work has been reviewed here) working with interpersonal meanings in a variety of genres and in narratives in particular.

The last group of studies reviewed highlight the importance of teaching *emotional speech* in contexts of second language acquisition in general. Pavlenko (2007) in her book *"Emotions and multilingualism"* offers a thorough summary of research work done on different areas on the topic of emotions with especial attention to cross-linguistic findings. In a chapter devoted to vocal cues, Pavlenko underlines a set of research outcomes significant for this study as she outlines frequently described vocal profiles for emotions. Moreover, Pavlenko suggests a set of factors influencing the perception and production of emotions in a foreign language. Two crucial conclusions are mentioned in her review: the fact "that linguistic background affects interpretation and expression of emotion through vocal cues in intercultural communication" and the "important implications for FL and L2 classrooms, where neither verbal nor vocal aspects of emotional expression have been getting much attention" (2007, p.75).

In a more recent study, Estebas-Vilaplana's findings also support the importance of teaching pitch range variability in EFL contexts; "it is crucial to instruct Spanish speakers to use a broader pitch range while speaking English since most of the times they interpreted high F0 peaks as non-expected and over-excited." (2014, p. 192). The present study considers the implications mentioned in the literature as valid for its context. Therefore, it proposes a set of pedagogical implications that follow from the study for the teaching and learning of the association of written and vocal aspects of emotional expression in English fairy tales for Spanish speakers training to become EFL teachers.

More locally, in Argentina, the oral expression of emotions at the level of university EFL teacher programs of studies has generated interest for some time now. Most published work has followed Brown's (1990) taxonomy as described in her book *"Listening to Spoken English"*. This author proposes a group of paralinguistic features that English speakers deploy to express emotions and attitudes. Brown's framework is oriented towards

improving students' auditory recognition of paralinguistic features. The oral production of these features is left aside. Bombelli and Soler (2001) point out the importance of paralinguistic features for the teaching of English pronunciation and share their working experience following Brown's taxonomy in a systematic teaching approach to paralinguistic features.

Additionally, Soler and Bombelli (2003) foreground the importance of reading aloud as a social activity placing special attention to the combination of suprasegmental and paralinguistic features following Brazil, Coulthard and Johns's (1980) discourse intonation theoretical framework and Brown's (1990) paralinguistic taxonomy. Soler and Bombelli argue that reading aloud is an interactive activity "with the reader aloud as the master of the oral message deliberately making phonological choices to organize the text according to his/her communicative aim." (2003, p. 170). Although significant for the purpose of this study, Bombelli and Soler (2001) and Soler and Bombelli (2003) base their suggestions on Brown's descriptive taxonomy, which has no specific reference to a phonetic analysis of data underpinning her recommendations.

The present study not only differs from previous studies as regards the taxonomy used, an adaptation of Roach et al.'s (1998) in this case, but it also proposes pedagogical implications which emphasize the importance of a multimodal approach for the teaching and learning of the expression of emotions in fairy tales. This approach is based on the findings following this study which combine the written expression of emotions uncovered by means of the system of APPRAISAL – AFFECT and GRADUATION – with the phonetic taxonomy developed to describe the oral resources speakers use to voice those written emotions in a specific social activity: the reading aloud of fairy tales.

It is of great importance to acknowledge Bombelli and Soler (2006) as the source of some of the initial questions that give birth to this thesis. The authors propose the possibility of complementing APPRAISAL studies which focus on lexicogrammatical resources of written language with a phonological approach. They postulate a possible connection between the system of APPRAISAL and the paralinguistic features proposed by Brown (1990) posing a set of questions. Some of these queries have influenced the present work:

Do paralinguistic features enrich, augment and mitigate attitudes?; how is it that paralinguistic features can reinforce and contradict the verbal content?; are paralinguistic features more closely associated with a certain attitudinal meaning (Affect, Judgement, Appreciation)?; are certain paralinguistic features associated with certain attitudes? (Bombelli & Soler, 2006, p.189)

The present research intends to answer some of these questions providing a systematic description of the association between emotions interpreted by drawing upon the system of APPRAISAL – AFFECT and GRADUATION – and the phonetic realization of those emotions.

In a recently published work, Bombelli, Soler and Waasaf (2013) explore even further the relationship between Eggins and Slade's (1997) APPRAISAL categories of affect and amplification and Brown's (1990) taxonomy in reading aloud. Bombelli et al. suggest the possibility of "establishing a phonological domain for the description of the language of evaluation" by means of an impressionistic analysis of paralinguistic features. The present study intends to build on Bombelli et al.'s work analysing the relationship between the written expression of emotions and its oral realization in a systematic way which complements the perception of suprasegmental and paralinguistic features with an acoustic analysis by means of specific software, PRAAT³¹.

Finally, Ariztimuño and Germani (2012) present the results of an analysis of the construction of emotion and attitude in both a written text and a native speaker's oral rendering of the text focusing on a selection of the phonetic resources proposed by Roach et al. (1998) as relevant to the description of *emotional speech*. Although the results obtained are not intended to be generalized, they establish an important precedent for the present study. In addition to this, Ariztimuño and Germani (2014) describe the outcomes of a comparison of pre- and post-tests performed by university EFL teacher program students at the University of La Pampa, who recorded themselves reading a story before and after being exposed to basic explanations on APPRAISAL (subsystem of AFFECT mainly) to "interpret evaluative language in written texts so as to express those meanings in their oral rendering by means of prosodic³² and paralinguistic features" (Ariztimuño & Germani,

³¹ PRAAT is a free scientific computer software package for the analysis of speech in phonetics designed and developed by Paul Boersma and David Weenink of the University of Amsterdam.

³² The term 'prosodic' is used in this quote meaning 'suprasegmental'.

2014, p. 8). This last study is of great significance to the present thesis since the results show that students benefited from the teachers' intervention as expressed by the students themselves in surveys and as shown in the results of the phonetic analysis of the data. In this way, Ariztimuño and Germani (2014) support the pedagogical implications suggested in this thesis.

The studies described in this section relate to the expression of emotion in human speech. The literature reviewed establishes the importance of studying the oral realization of emotion in fields such as computational linguistics, speech synthesis and most significantly for this thesis, educational contexts.

In brief, this chapter reported on past and current research related to the written and oral expression of emotion as well as its place in EFL contexts. It is evident from the work reviewed that the present study occupies an empty space in the existing literature. Prior studies provide clear evidence supporting the use of APPRAISAL as a linguistic tool for the analysis of the written realization of emotion and of a specific phonetic taxonomy for the description of the oral realization of those emotions. Previous research also suggests that the pedagogical implications proposed for the teaching and learning of the expression of emotions might be beneficial for students reading aloud fairy tales at the university EFL teacher training programs.

The following chapter describes the study design, the data collection and analysis procedure.

CHAPTER IV

METHODOLOGY

Chapter IV describes the research design of this study. This includes specifying the materials used, that is the rationale underlying this corpus selection and the methodology followed to classify and categorize the data, and to analyse and explain the findings.

IV.1 Research design

This study adopts a **sequential mixed methods research design.** This kind of design implies a process of collection, analysis and association of qualitative and quantitative methods in order to understand a research problem and answer the formulated research questions (Creswell, 2012; Hernández Sampieri, Fernández Collado, Baptista, 2010). To be more specific, the present study implements an **exploratory sequential mixed methods design** as it aims at exploring, describing and relating the written and oral expression of emotions in English fairy tales (Creswell, 2012). Two phases in the study can be clearly identified:

- a) an initial qualitative phase to manually classify and label the emotion terms appearing in a set of fairy tales as well as to categorize the different phonetic resources following the researcher's perceptual interpretation of one oral rendering;
- b) a follow up quantitative approach to corroborate the researcher's perceptual interpretation with acoustic numerical measures of frequency (pitch height and pitch range), amplitude (loudness) and duration (tempo), and to describe and explain the association among different written and phonetic variables used in the expression of emotion by means of percentages captured in terms of tendencies.

The qualitative part of this work is an in-depth exploration and categorization of emotion lexis and its phonetic realization on the basis of a bound corpus (Creswell, 2012). The quantitative side of the research adopts an **explanatory correlational design** aiming at describing and measuring "the degree of association (or relationship) between two or more variables" by means of statistical tests (Creswell, 2012, p. 340). The study is not intended to establish a relation of causality between the written and oral expression of emotions but rather to account for the tendencies and patterns of association that arise from analysing these two modes of expression in the specific context of this work.

IV. 2 Materials – corpus selection

The selection of the corpus was carried out with a set of defining characteristics in mind. This "sampling frame" (Creswell, 2012, p.142) limited the corpus to fairy tales, selected following the description of the genre by Hasan (1996), written and read aloud in British English. Six fairy tales were downloaded from the webpage http://storynory.com which includes a selection of stories in their written and oral form available for free download³³. Regardless of this fact, explicit permission was asked by email to the editor and producer of the webpage, Hugh Fraser, who kindly granted his consent for the use of the material for this study (See Appendix A).

Three variables were controlled for the selection of the samples, one for the written texts, one for the audio files and one for the storytellers. The written fairy tales were controlled as regards the presence and number of linguistic expressions denoting emotions and the semantic resources of intensification. The control variable for the audio files was their length in minutes; the audio files selected lasted no more than ten (10) minutes³⁴. Finally, the stories were read aloud by trained professional storytellers. Six fairy tales were

³³ The written texts were copied and pasted in Word documents and the audio files were downloaded as mp3 files. These texts and audio files are available as 'Appendix B' in the supplementary material stored in the CD attached to this thesis.

³⁴ The quality of the audio was taken into consideration before selecting Storynory's webpage as the source for the materials. A primary requirement for the study of vocal affect expression "is that the recording quality is as good as possible given the practical circumstances" (Juslin & Scherer, 2005, p. 95).

selected following these criteria³⁵. A sample of stories read by two women was selected³⁶; both readers were trained storytellers who studied Classical Drama at the prestigious Central School of Speech and Drama at the University of London. The fairy tales were downloaded in their written and oral versions and edited for any discrepancies between the words written and read aloud (See Appendix B – supplementary material in CD).

As a final step in the selection of the corpus, three teachers especially trained in the field of English phonetics and phonology at the University of La Pampa were asked to listen to and grade the six stories previously selected in terms of how effective, expressive and engaging the storyteller's reading was. In order to do this, the teachers were given a four-point-rating scale prepared by the researcher (See Appendix C³⁷). The choice of an even number for the rating scale was made to force the answers to fall at either side of the continuum and not at a middle point (Dillman, Smyth & Melani, 2011).

The teacher raters were only told that this rating scale had been prepared as part of a study on reading aloud fairy tales. The rating scale consisted of a set of instructions to be followed in order to answer three questions focused on how effective, expressive and engaging the readers' oral rendering was. The first question – how would you evaluate the reader's aloud overall performance? – was related to the effectiveness of the performance. The raters could assess the reading on a scale going from 'unsatisfactory' to 'very effective'. The second question – how would you evaluate the reader's aloud rendering of emotion? – addressed the reader's expression of emotion. In this case, the raters were asked to choose from a scale going from 'unsatisfactory' to 'very expressive'. And finally, the third question – how engaging would you say the oral performance is? – aimed at focusing the raters' attention on some sections of the stories which had been underlined and boldfaced as well as in their phonetic realization as regards pitch height and range, loudness, tempo and pauses. For this last question the raters had to select an option going

³⁵ The six fairy tales selected were: 1) When the sun hid in her cave, 2) The emperor's dream, 3) The tale of Androcles and the Lion, 4) King Thrushbeard (kth), 5) The elves and the shoemaker (elsh), 6) Rumpelstiltskin (rum).

³⁶ The choice of two women is justified by the general belief that women are more emotional than men. Different studies indicate that women as a group not only interpret the phonetic realization of emotions better than men but are also more attuned when portraying emotions orally (Pavlenko, 2007).

³⁷ Appendix C contains an example of the rating scale. Raters were sent six rating scales, one per story.

from 'poor' to 'very engaging'. No reference was made to the emotions inscribed in the written text so as to avoid biasing the raters' reactions to the texts. The three stories with more ratings towards the "very" (more effective, more expressive or more engaging) end were selected as the corpus to be analysed in the present study.

Interestingly, although the six original fairy tales were written by different authors and read by two women, the three fairy tales selected by the raters were all written by the Brothers Grimm and read by the same reader aloud. This fact made the acoustic analysis of the audio samples easier to some extent as regards frequency, amplitude and duration means.

IV.3 Data collection procedures

The data collection adopted a sequential mixed methods approach. A first qualitative phase was carried out for the manual classification of emotion terms in the written texts and for the perceptual categorization of suprasegmental and paralinguistic features of the oral rendering. A second quantitative phase was performed only for the collection of numerical acoustic measurements of the suprasegmental features of frequency, amplitude and duration.

IV.3.1 Data collection of the written texts

The linguistic expression of emotion (emotion terms) was manually identified and classified drawing on pre-established categories taken from the system of APPRAISAL, the subsystems of AFFECT and GRADUATION to be precise (Bednarek, 2008; Martin & White, 2005). As stated in Chapter II, the present study focuses on the most explicit level of resources used in construing attitudinal meanings: the word. The rationale supporting this decision is mainly pedagogical: the identification and interpretation of explicit cues to ATTITUDE and GRADUATION could be considered a first step towards students' interpretation of more complex resources deployed by language users to create attitudinal meanings.

Even when the focus of the analysis is the expression of emotion in individual lexical items (words), the unit of analysis selected was the clause. The clause is defined by Halliday and Matthiessen (2014) as "the central processing unit in the lexicogrammar – in the specific sense that it is in the clause that meanings of different kinds are mapped into an integrated grammatical structure" $(p.10)^{38}$. The lexical items denoting INSCRIBED AFFECT were manually labelled for AFFECT types and subtypes after the researcher analysed the word in its surrounding co-text and context. Therefore, even when the clause was the discrete unit of analysis, the co-text and context were always taken into account in terms of their contribution to the evaluative semantics of each lexical term.

All the clauses containing emotion terms already labelled for AFFECT types and subtypes were then classified in terms of the typical emotion they portrayed. This analysis followed the categories proposed by Bednarek (2008)³⁹ developed in Section 1, Chapter II, *Theoretical Framework*. As can be seen in Table 4.1 the instrument used to record the researcher's classification allotted distinct columns for the labelling of the type, subtype and typical emotion of AFFECT, the excerpt, the emoter and the trigger⁴⁰, as well as a last column for the type of GRADUATION considered for this study: FORCE- intensification (See Appendix D).

³⁸ Even though APPRAISAL systematises discourse semantics resources within SFL and thus "it is concerned with meaning beyond the clause" (Martin & White, 2005, p. 9), for the purpose of this study it was necessary to choose a unit of analysis smaller than the whole text. A unit larger than the emotion term, the clause, was selected as a concrete unit which realizes different meanings and which can be divided into grammatical units realized orally as tone units.

³⁹ Bednarek's Table 5.18 (2008, pp. 173-175).

⁴⁰The categories of "emoter" and "trigger" are included in the analysis only to give contextual details to the extracts. Even though it might be interesting to investigate how these variables may influence the phonetic realization of INSCRIBED AFFECT, this falls outside the focus of the present study.

Table 4.1

<u>Latempres</u> of mos	enable in i lei type	ana one one	on actual conte	enen
INSCRIBED AFFECT type, subtype and typical emotion	Excerpt	Emoter	Trigger	GRADUATION: FORCE - intensification
happiness: cheer - happiness	"I shall be <i>very</i> glad to do it."	The shoemaker	Making shoes for the elves	glad : infusion: up-scaling <i>very</i> glad : isolation: up-scaling
unhappiness: misery - sadness	"she thought of her lot with a sad heart,"	The king's daughter	Herself	sad: infusion: up-scaling
happiness: affection - like	"The woman liked the idea,"	The shoemaker's wife	The idea	no intensification
satisfaction: pleasure - pleasure	"Your song has pleased me <i>so</i> <i>well</i> "	The king (kth)	The fiddler's song	pleased : infusion: up-scaling pleased me <i>so well</i> : isolating: up – scaling
dissatisfaction: displeasure - anger	"and in his anger he plunged his right foot so deep into the earth"	Rumpelstiltskin	The queen knowing his name	anger: infusion: up-scaling
security: quiet - assurance	"be comforted "	The king's daughter (kth)	The evil days are passed	no intensification
insecurity: disquiet - fear	"The queen was horror struck"	The queen/ miller's daughter	The manikin's demand	horror struck : infusion: up-scaling
inclination: desire - wishes	"he was about to set to work with fresh hope for the future"	The shoemaker	What had happened the night before	no intensification
surprise: surprise	"he was astounded "	The shoemaker	The pair of shoes	astounded: infusion: up-scaling

Examples of INSCRIBED AFFECT type and GRADUATION data collection

Note. kth = King Thrushbeard. Emotion terms are written in **boldface**. Isolating graders are written in *italics*.

In order to validate the accuracy of the interpretation and labelling of the lexical items as regards AFFECT and GRADUATION, a colleague who has used the APPRAISAL framework for research was asked to check the researcher's data collection (Creswell, 2012). Agreement was reached in most cases and differences were discussed and settled so as to further validate this qualitative phase of the study. Once the written text data collection was completed, the audio samples were extracted as described in the next section.

IV.3.2 Data collection of the oral texts

The clauses containing instances of INSCRIBED AFFECT and GRADUATION were identified in the mp3 audio files and extracted using PRAAT. The resulting audio files (included in Appendix E in supplementary material in CD) were then ready for a perceptual (qualitative) and acoustic (quantitative) descriptive categorization. The choice of including both perceptual and acoustic analysis was made following Cruttenden's (2008) assertion that "the most fruitful technique of discovering the significant acoustic cues is that of SPEECH SYNTHESIS, controlled by listeners' judgements" [emphasis on the original] (p. 24). The importance of perception as a decoding mechanism is thus established as listeners' judgements play a central role in the identification of relevant vocal cues for the expression of emotion. The complementary nature of acoustic phonetics to perception is implied as our hearing mechanism selects and interprets only those features considered to be relevant from the great amount of acoustic information perceived (Cruttenden, 2008).

Following the sequential mixed methods research design adopted, the oral data collection was performed in a certain order. The perceptual categories were always assigned first so there was no interference by the acoustic measures and images produced by PRAAT (See Appendix E and G in supplementary material in CD). The unit of analysis adopted for this phonetic part of the study was the tone unit⁴¹. This study draws on the British tradition to define the term as "one 'snatch' or line of melody" (Halliday & Matthiessen, 2014, p. 14). Within this tradition pitch changes "signal the division of utterances into INTONATIONAL PHRASES" [emphasis on the original] or tone units and their boundaries "generally correspond syntactically with clause and major syntactic phrase boundaries" (Cruttenden, 2008, p. 263).

Each clause was played as many times as necessary for their perceptual classification. Clauses were divided into tone units, and labelled for suprasegmental and paralinguistic features following the adaptation of Roach et al.'s (1998) taxonomy for

⁴¹ Even though the tone unit is a phonological (not phonetic) unit of analysis, this study uses this higher, more abstract level of analysis for pragmatic purposes only. It is not the purpose of this study to analyse phonological meanings of any kind.

emotional speech coding (See Chapter II, Section 2). The taxonomy was adapted so as to meet the purpose of this study which does not fall within the area of computational linguistics but rather within descriptive and applied linguistics. That is, the selection and analysis of the corpus were not intended to be read by a computer so as to duplicate or transfer features to synthetic speech but rather to associate the written and oral expression of emotions for an EFL context. Therefore, new categories of analysis representing intermediate values were added to some variables in the taxonomy: "mid" for pitch height, "unmarked" for pitch range and precision, and "moderate" for loudness and tempo. The absence of these intermediate values in the original taxonomy could be explained in terms of computer language having a tendency to be expressed in binary oppositions (e.g. high vs. low).

To make the categorization more oriented towards the study's ultimate pedagogical goal, and thus, more "student friendly", the analysis of pitch direction and pause was performed following the British tradition. This tradition describes intonation in terms of pitch contours and uses the notion of tone unit (pre-head, head, nucleus, tail) instead of the categories belonging to ToBI as proposed by Roach et al. (1998). Moreover, decisions as regards the division into tone units were made correlating tone unit boundaries with those of grammatical constituents whenever it was possible. The changes performed to Roach et al.'s taxonomy did not distort its original descriptive–analytic potential but rather offered an *emotional speech* framework oriented towards educational contexts. The phonetic framework proposed for the description of emotional speech in the present study is designed so as to be accessible to students attending the teacher training course of studies at the University of La Pampa.

The resulting taxonomy used in the analysis is divided into the following phonetic features⁴²:

a. Suprasegmental features – all these features were perceptually interpreted and classified by the researcher but only pitch height, range and direction, loudness, tempo and pause were acoustically measured as frequency, amplitude and duration using PRAAT:

⁴² See Chapter II, Section 2, for a detailed description of each phonetic variable.

- i. Pause: it was associated with tone unit boundaries and considered to be significant if/when it occurs at odds with grammatical boundaries. The duration of the pauses was classified on perceived deviation from the speaker's norm⁴³ and measured in seconds with PRAAT.
- ii. Pitch direction: it was perceived as the most prominent movement in the tone unit, the nucleus. It was classified as fall, rise-fall, rise, fall-rise and level first perceptually and then corroborated by interpreting pitch contour drawings obtained with PRAAT.
- iii. Pitch height: relevant pitch height occurs on the first accented syllable in the head, the onset, and on the nucleus. Only the nucleus height was considered for this analysis. It was classified perceptually as high, mid or low and measured with PRAAT in Hz using the command *move cursor to maximum pitch*⁴⁴.
- iv. Pitch range: it was associated to the width of movement perceived on the nucleus of the tone unit. It was classified perceptually as wide, narrow or unmarked. It was measured in Hz selecting the portion of audio file where the nucleus took place and using PRAAT's commands *move cursor to maximum pitch* and *move cursor to minimum pitch* to get the highest and lowest values of pitch to calculate the range between them.
- v. Loudness: It was perceptually classified as loud, moderate or soft. It was measured in dB (decibels) using the tone unit boundaries as limits for the audio selection. PRAAT was used to measure the amplitude mean in dBs using the command *get intensity*.

⁴³ The speaker's norm was defined using two methods: 1) the storyteller's baseline was obtained from the perceptual and acoustic analysis of all the phonetic variables of an audio sample which was classified as unmarked as regards AFFECT and GRADUATION; 2) each fairy tale audio file was measured to automatically extract mean values of pitch height in Hz (See Appendix G). As regards amplitude, it has to be acknowledged that "absolute intensity [amplitude] measures as given by Praat are largely meaningless" (Styler, 2015, p. 21) and therefore no unique speaker's reliable norm average could be calculated in dB. An amplitude mean was calculated for each story and comparisons were made considering those independent means. The comparison between different AFFECT types was possible as relative amplitude between segments, words or tone units "can be measured with an uncalibrated microphone … in a consistently quiet area" (Styler, 2015, p. 21). To guarantee the reliability of the amplitude values, only the measures obtained for Rumpelstiltskin were used for the quantitative corroboration as it contained instances of all the AFFECT types analysed.

⁴⁴ The preference of this command instead of *get maximum pitch* was motivated by the fact that it allowed the researcher to see the exact place where the measurement was being taken so as to ignore any portions of the pitch contour considered to be PRAAT bugs (extra high or low pitch levels which do not coincide with the first formant).

- vi. Tempo: it was classified perceptually as fast, moderate or slow for stretches of syllables using the tone unit as the unit of analysis, and as clipped, drawled or unmarked for individual syllables. It was also measured by means of PRAAT counting the number of syllables per second (s)⁴⁵. The categories proposed by Arnfield et al. (1995), slow: 3.3 syllables per second; medium: 4.3; and fast: 5.9 were taken as point of reference for the classification of syllables per second.
- vii. Precision of articulation: it was classified perceptually as precise, slurred or unmarked.It was also given a tier on PRAAT's text grid so as to have a complete analysis of the audio files even though it was not measured using the software.
- b. Paralinguistic features were perceptually interpreted and classified by the researcher. Even though these features were not measured using PRAAT, they were allotted a specific tier so as to mark the exact portion of audio file where the feature was perceived.
 - i. Voice quality: it was perceptually classified as: falsetto, creak, whisper, rough, breathy, ingressive, ventricular, nasal and glottal attack.
 - ii. Vocal effect: it was classified as clear-throat, sniff, gulp, click, breath-in, breath-out or breath when perceived.
 - iii. Voice qualification: it was classified as laugh, tremulous, cry and yawn when perceived.

These suprasegmental and paralinguistic features were assigned a column each in a table created to register the perceptual analysis of each AFFECT type (See Appendix F – supplementary material in CD). Table 4.2 illustrates the perceptual analysis of the clause "she made herself especially merry over a good king".

⁴⁵ Two different units of analysis were considered for tempo: the tone unit for perceptual categorization and the number of syllables per second for acoustic measures. These units of analysis do not necessarily coincide as tone units are not delimited by time.

Tone units extracted from King Thrushbeard	Pitch level	Pitch Range	Pitch Direction	Loudness	Tempo	Precision	Pause	Para- linguistic
tone unit 1: she made herself especially merry	high	wide	fall-rise	moderate	fast	precise		
tone unit 2: over a good king"	mid	narrow	fall	moderate	fast	precise		glottal attack

Table 4.2Example of qualitative perceptual phonetic data collection organization

The clause exemplified in Table 4.2 is divided into 2 tone units as shown in the table. Each tone unit is assigned a value for each variable (e.g. high for pitch level, etc.) and a description of the paralinguistic features used if any (e.g. glottal attack).

After registering the perceptual analysis, the acoustic measurements were taken and saved as PRAAT text grids. Appendix E (included in the supplementary material burned in the CD which accompanies this thesis) contains the audio files and PRAAT text grids for each clause analysed. Figure 4.1 illustrates the resulting PRAAT image for the analysis of "she made herself especially merry over a good king".



Figure 4.1 - PRAAT image of acoustic analysis: "she made herself especially merry over a good king".

A PRAAT image was taken of each clause acoustically analysed. Appendix G (enclosed in the CD with supplementary material) includes all the images.

An experienced teacher of phonetics and phonology at the University of La Pampa was asked to check the interpretation and accuracy of the qualitative perceptual data and the reliability of the quantitative acoustic measures. In order to do this, the phonetic taxonomy and criteria for data extraction were explained to him and the extracted audio files as well as the researcher's analysis were sent to him by email. After he performed both the perceptual and acoustic measurement tasks, he met with the researcher to share his results and to reach an agreement on any differences. Previous to the discussion of discrepancies the researcher and the rater reached an agreement of 97%.

The phonetic data collection was checked for validity by means of triangulation, as data were corroborated by different methods of collection: qualitative perception and quantitative acoustic measurements; and also by means of an external rater who checked both instruments of data collection and the categories applied by the researcher as well (Creswell, 2012).

The following visualization presented in Table 4.3 offers a summary of the data collection procedures:

	Data Collection Method	Data obtained			
Qualitative Research	<i>Written documents</i> : three fairy tales by the Brothers Grimm.	<i>Text data</i> : manually extracted cases of pre- established categories of INSCRIBED AFFECT types and GRADUATION. Unit of analysis: the clause.			
	<i>Audio materials</i> : mp3 files with the recording of the same three fairy tales; clauses containing INSCRIBED AFFECT and its GRADUATION.	Audio data: perceptually categorized following an adaptation of Roach et al.'s (1998) taxonomy for <i>emotional speech</i> coding.Unit of analysis: the tone unit.			
Quantitative Research	<i>Audio materials</i> : clauses containing INSCRIBED AFFECT and its GRADUATION.	g <i>Numerical data</i> : measures of frequency (pitch heigh and pitch range), amplitude (loudness) and duration (tempo) as well as pitch direction images obtained using PRAAT.			
		Unit of analysis: the tone unit for frequency and amplitude, and syllables per second for duration.			

Table 4.3

Visualization of the data proc	edures
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IV.4 Data analysis procedures

The data obtained were analysed with the research questions stated in Chapter I, Section I.2.2, in mind. In order to do this, two types of analyses were carried out: a qualitative analysis and a quantitative analysis using the statistics software "*Statistical Package for the Social Sciences, version 19*" (SPSS).

IV.4.1 Qualitative data analysis procedure

IV.4.1.1 Qualitative data analysis: INSCRIBED AFFECT

All the clauses containing instances of INSCRIBED AFFECT were grouped according to AFFECT type, subtype and typical emotion portrayed as illustrated in Table 4.1. The semantics inscribed was most relevant for the labelling of most cases always accompanied by an interpretation of the co-text and context. In some cases, however, the phonetic features selected by the storyteller offered new cues for the interpretation of affect. In these cases, the co-text and context surrounding the emotion term were reconsidered in the light of the phonetic information so as to decide on the most appropriate label for the emotion term.

The clauses were grouped into the nine AFFECT subtypes found in the text data and a frequency test was run. Percentages of occurrence below 5% were left out for the phonetic analysis. Categorical variables of seven AFFECT subtypes were created to be used in the quantitative correlational phase of the study.

AFFECT subtypes with frequencies of occurrence higher than 5% were then analysed in terms of their phonetic realization. Each suprasegmental feature was transformed into a nominal variable in the SPSS software with three values each so as to obtain categorical variables for the following quantitative correlational phase of the study⁴⁶. Table 4.4 contains the three values assigned to each nominal variable.

⁴⁶ The suprasegmental feature of "pause" and all paralinguistic features were left aside and analysed later as the number of instances of occurrence was not large enough to be processed with SPSS. The feature of 'tempo' was divided into stretches and syllables as different labels were needed for each category.

Suprasegmental perceptual nominal variables suprasegmental perceptual nominal variable variable values pitch height 1high, 2- mid, 3- low pitch range 1wide, 2- unmarked, 3- narrow pitch direction 1- fall, 2- rise-fall, 3- rise, 4- fall-rise, 5- level 1- loud, 2- moderate, 3- soft loudness 1- fast, 2- moderate, 3- slow tempo stretches clipped, 2- drawled, 3- unmarked tempo syllables 1precision 1precise, 2- slurred, 3- unmarked

Table 4.4

IV.4.1.2 Qualitative data analysis: graduated INSCRIBED AFFECT

All clauses containing emotion terms were then analysed in terms of the semantics of graduation. Following Martin and White's (2005) classification, the instances of GRADUATION: FORCE - intensification were classified as infused, isolated or expressed via repetition. Degrees of intensification: low, median and high (Martin & White, 2005) were determined with the help of the Longman Exam Coach Dictionary (2007). Both modes and degrees of intensification as described by Martin and White were considered for the phonetic analysis.

When analysing the sample texts, some cases of intensification fell outside Martin and White's (2005) categories of analysis. An inventory of these different expression strategies used to intensify affect was organized (See Table 5.11). These linguistic resources for intensification were also considered for the phonetic analysis.

The analysis of the oral realization of intensification posed some unpredicted methodological challenges. The data was controlled in relation to two variables: the type, subtype and typical emotion realized by INSCRIBED AFFECT (e.g. [unhappiness: misery sadness]), as well as in terms of the phonetic characteristics of the cases analysed (e.g. low pitch height). Only those cases that reflected the phonetic characteristics suggested per AFFECT type described in Chapter V, Results, Section 1, (See Table 5.4) were taken into consideration for the phonetic analysis of the modes and degrees of GRADUATION. At least 4 instances of the same typical emotion had to be available in the texts studied.

After controlling these variables, only cases classified as [dissatisfaction: displeasure - anger] (4 cases), [insecurity: disquiet - fear] (10 cases), [satisfaction: pleasure - pleasure] (4 cases) and [unhappiness: misery - sadness] (5 cases) were analysed as regards the phonetic realization of GRADUATION. In order to compare the phonetic realization of INSCRIBED AFFECT and graduated INSCRIBED AFFECT, tone units containing amplified emotions were contrasted with the perceptual and numerical means obtained for pitch height, pitch range, loudness and tempo per AFFECT type as described in Tables 5.4 and 5.5 as well as Figures 5.1, 5.2 and 5.3.

IV.4.2 Quantitative data analysis procedure

The first quantitative step was to obtain frequencies and percentages for each perceptual value in relation to each AFFECT subtype. Those percentages were compared with the acoustic numerical measures obtained for frequency (pitch height and range), amplitude (loudness) and duration (tempo) so as to corroborate the perceptual values. Percentages of occurrence for each mode of intensification were also calculated. Tables and graphics were designed and included in this thesis when necessary. Preliminary phonetic profiles were created and classified according to their prediction value. The prediction value was based on the percentages resulting for each value. The higher the percentages obtained, the greater the possibility for the profile to be successful to perceive and produce *emotional speech* considering the phonetic features described. The degree of success and thus, the prediction value, was measured considering the percentages indicating the frequency of association⁴⁷ between the suprasegmental nominal variable values and the AFFECT subtypes:

- Frequencies below 35% were considered to have low prediction value;
- Frequencies ranging from 35% to 65% were assigned limited prediction value;
- Frequencies ranging from 66% to 85% were considered as having good prediction value;
- And frequencies above 86% were given strong prediction value.

⁴⁷ Creswell's (2012) possible interpretation of coefficient sizes was taken as a guide to assign prediction value to the frequencies.

The same prediction value scale was used to interpret other frequencies calculated in the present study.

Numerical measures taken with PRAAT were used to obtain descriptive statistics using SPSS of four quantifiable variables: pitch height and pitch range (measured as frequency), loudness (measured as amplitude), and tempo in stretches (measured as syllables per second). As previously stated, these measures were used to corroborate perceptual values obtained for each AFFECT subtype. These acoustic measures were also used to perform correlation statistics tests in order to answer research question 2.

This chapter has presented the research design selected for the present study, the materials used as corpus, the criteria for data selection as well as the procedures followed for their analysis. The rationale for sequential mixed methods research design adopted can be justified briefly as follows. Qualitative analysis of the written expression of emotion and its intensification was carried out as emotion terms were manually labelled following AFFECT and GRADUATION coding. The qualitative data were transformed into quantitative information as percentages of AFFECT subtypes and GRADUATION modes were obtained. The oral expression of emotion was also first analysed qualitatively as tone units were perceptually valued in terms of their suprasegmental and paralinguistic realization. These qualitative data were transformed into quantitative percentages of frequency of occurrence for each suprasegmental value. Additionally, the percentages obtained for four suprasegmental features: pitch height and range, loudness and tempo in stretches were acoustically corroborated by acoustic numerical measures (quantitative data). The written and oral realization of intensification strategies were correlated as a Pearson test was performed. In this way, qualitative and quantitative analysis has been successfully combined in order to guarantee the validity and reliability of the findings suggested in this study.

Chapter V presents the results obtained as regards the relation between AFFECT subtypes and phonetic variables and the association between the written semantics of intensification (GRADUATION) of INSCRIBED AFFECT and the phonetic variables of pitch height and range, loudness and tempo.

CHAPTER V

RESULTS

Chapter V presents the results obtained from the analysis of the data collected following the mixed methods approach described in the previous chapter. It reports the results in relation to the first two research questions⁴⁸ namely: 1- How does INSCRIBED AFFECT in the fairy tales analysed relate to the suprasegmental and paralinguistic features selected by the storyteller to express those emotions orally? 2- What is the association between the written semantics of intensification of INSCRIBED AFFECT and the phonetic variables of pitch height, pitch range, loudness and tempo?

It is divided into two main sections: the first section deals with the relation between INSCRIBED AFFECT that was observed in the fairy tale sample texts of this study and the suprasegmental and paralinguistic variables used by the expert storyteller to realize those emotions orally; the second section describes the results obtained on the association between the written semantics of intensification (GRADUATION: FORCE) of INSCRIBED AFFECT and the phonetic variables of pitch height and range, loudness and tempo.

Section 1

Section one reports on the results obtained in order to establish and describe the relation between *emotion talk* – INSCRIBED AFFECT – and *emotional speech* – the expression of emotion by means of suprasegmental and paralinguistic features – in the fairy tales selected. This section is organized following the sequential order in which the data was obtained. Therefore, the results dealing with *emotion talk* are presented first. Then, the results regarding the phonetic realization of each AFFECT subtype are described in the order they were collected – perceptual results are mentioned before acoustic ones.

⁴⁸The third research question relates to the implications of the findings for the teaching and learning of the expression of emotions when reading aloud fairy tales at university level EFL teacher training programs. This question is dealt with in Chapter VII.

V.1.1 Emotion talk

The following results refer to three important aspects of the emotion terms found in the corpus of this study: 1) the types and subtypes of INSCRIBED AFFECT and the typical emotions foregrounded in each instance, 2) the general valence of emotion terms that was observed in the fairy tales studied and 3) the lexicogrammatical realization of AFFECT subtypes.

V.1.1.1 INSCRIBED AFFECT types

An initial descriptive statistical frequency analysis was done on the data collected on *emotion talk*. The statistical package SPSS was used to obtain the frequency and percentages of clauses (unit of analysis) labelled as containing INSCRIBED AFFECT. These results are shown in Table 5.1. They are grouped following the classification of AFFECT proposed by Bednarek (2008): un/happiness, in/security, dis/satisfaction, dis/inclination and surprise. A more delicate categorization as regards the typical emotion expressed for each instance is also included in Table 5.1.⁴⁹ (See Appendix D for a detailed list of all the clauses and their labels.)

The order in which the results appear in Table 5.1 goes from those categories which were more frequent to those which were the least frequent in the corpus of fairy tales. As can be seen in Table 5.1, nine different subtypes of AFFECT were found in the fairy tales but only seven had a percentage of at least $5\%^{50}$. Therefore, only the first seven AFFECT types were considered as variables for *emotion talk* for the phonetic analysis that follows in section V.1.2.

⁴⁹ This finer classification was done following Bednarek's Table 5.18 (2008, pp. 173-175).

⁵⁰ AFFECT type percentages were only calculated for the purpose of disregarding those which were observed in fewer than 5% of the clauses as this resulted in a very limited number of instances for the phonetic analysis to be meaningful. Regardless of this fact and although it is not the focus of this present study, it might be of great interest to analyse the reasons why these particular fairy tales contain so many instances of some AFFECT types instead of others.

Table 5.1

Descriptive frequency and percentage of AFFECT types, subtypes and typical emotion in the sample

	AFFECT types and subtypes	Typical emotions	Number of clauses per AFFECT type	Percentage per AFFECT type
1-	insecurity: disquiet	fear (11)	13	23.6%
		embarrassment (1)		
		confusion (1)		
2-	happiness: cheer	happiness (5)	10	18,2%
		cheer (5)		
3-	dissatisfaction: displeasure	anger (8)	8	14.6 %
4-	satisfaction: pleasure	pleasure (6)	7	12,7%
		gratitude (1)		
5-	unhappiness: misery	sadness (6)	7	12.7%
		disappointment (1)		
6-	happiness: affection	pity (2)	4	7,3%
		like (1)		
		love (1)		
7-	surprise	surprise (3)	3	5,5%
8-	inclination: desire	wishes (2)	2	3,6%
9-	security: quiet	assurance (1)	1	1.8%
total	number of clauses		55	100%

Note. The number of instances is shown between parenthesis ().

When identifying AFFECT types and subtypes some borderline cases were observed. In order to decide on one AFFECT type rather than another, the co-text and the cultural context were considered for most cases. Behavioural processes, for example, such as 'cry' and 'weep', could be analysed as denoting more than one AFFECT type. 'Cry/ing/ied', being polysemous in nature, was categorized as portraying five different emotions in the data studied: [unhappiness: misery, dissatisfaction: displeasure, happiness: cheer, happiness: affection, insecurity: disquiet]. Once the terms were analysed considering the co-text and context a clearer definition as to which AFFECT type and subtype they belonged to was possible (See Appendix D for details).

The word 'unhappy', however, was categorized without difficulty as [unhappiness: misery - sadness] but then needed to be considered in particular when the first general listening of the expert storyteller's oral rendering was done. It was, in fact, the most curious borderline case. This specific case is described in detail in Section V.1.1.1.1 below.

V.1.1.1.1 Borderline AFFECT case: 'unhappy'

The case of the word 'unhappy' highlights the complexity of labelling *emotion talk*, especially when the texts analysed are available in their written and oral forms. It also illustrates the possibility speakers have to colour their messages by means of linguistic and non-linguistic resources and the need researchers, teachers and students have of analytical tools designed to face this challenge. The emotion term 'unhappy' is used three times in King Thrushbeard⁵¹ as the girl in the story repeats the phrase "Ah, unhappy girl that I am, if I had but taken King Thrushbeard." (See clauses, audio extracts and PRAAT text grids 10, 28 and 29 in Appendixes E and G in supplementary material (CD) for details). However, after listening to the clauses, the original label – [unhappiness: misery - sadness] – was reconsidered. The co-text and context surrounding the clauses also supported a change of label.

From the very beginning of the story the king's daughter (the emoter) is characterised as "proud and haughty" and someone who ridicules people. Changing her social status, from royalty to plebeian, in such an abrupt way makes her feel displeased and angry. Only later does she feel sad. The girl is portrayed as a determined character that does not accept her father's wishes quietly but rather offers opposition. The co-text depicts the king's daughter as having "to let herself be wedded" and as being "obliged" to leave her father's palace to go live with a beggar. Moreover, there are no indications that the girl feels sad until later on in the text when she comes to understand her inevitable new reality of poverty and desperation.

Knowledge of the cultural context also supports this interpretation: descending in the social scale from being the "king's daughter" to a "beggar's wife" seems an infuriating situation. These implications seem to be perceived by the expert storyteller whose oral rendering is characterized by high and expanded pitch and loud volume⁵², variables which coincide with those suggested by previous research for a feeling of anger (Juslin & Scherer, 2005; Pavlenko, 2007; Scherer, 2003). After considering the new cues provided by the oral

⁵¹ See Appendix B for both the written and oral versions of the story.

⁵² Pitch height, pitch range and loudness are easily perceived by the human ear.

rendering, the co-text and context the first two instances were labelled as [dissatisfaction: displeasure - anger].

The third time the word and sentence appear in the fairy tale the storyteller's phonetic choices vary considerably from the first two instances in which she clearly expressed dissatisfaction. The girl's words as now uttered seem to show a profound feeling of sadness as the extract is read with low and restricted pitch and soft volume. These features signal sadness if previous tendencies for *emotional speech* are considered (Juslin & Scherer, 2005; Pavlenko, 2007; Scherer, 2003). Therefore, this last instance was labelled with the original category of [unhappiness: misery - sadness]. The situational context within the narrative seems to support this decision: the king's daughter is now portrayed as a sad soul after walking for a while in her new social self. This new sad emotional prosody is accompanied by an intense feeling of insecurity which taints the rest of her description in the text until a happy ending is reached.

The reasoning explained above determined the definite labelling of the clause as follows: the first two instances were changed to [dissatisfaction: displeasure - anger] while the third one kept the original classification [unhappiness: misery - sadness]. This example, described in some detail here, reflects how co-textual and contextual clues can be complemented by phonetic information to interpret and code attitudinal meanings.

After classifying all cases of emotion terms into an AFFECT type, subtype and typical emotion that would work well with co-textual and contextual clues as well as with each term's first perceptual interpretation of the storyteller's oral realization further analysis was done and its results are reported next.

V.1.1.2 Valence

The emotion terms identified and labelled for AFFECT were analysed as regards whether their valence varied towards the positive or negative pole. A preliminary analysis of the 55 clauses classified for INSCRIBED AFFECT results in a total of 28 cases of clear negative polarity (51%), 20 of clear positive polarity (36%) and 7 neutral or ambiguous instances (13%). In order to disambiguate the ambiguous cases of [surprise] and [inclination] the co-text was observed for positive or negative semantics. Analysis of the co-text inclined the valence of all those instances towards the positive pole (See examples below). As a result, out of the 55 clauses classified for INSCRIBED AFFECT, 28 were negatively loaded ([insecurity]: 13, [dissatisfaction]: 8 and [unhappiness]: 7) and the remaining 27 were classified as positive ([happiness: cheer]: 10, [happiness: affection]: 4, [surprise]: 3, [inclination]: 2, [security: 1]). The final valence percentages were considered to be balanced in the sample stories, 51% negative vs 49% positive with a slight tilt towards the negative pole.

The examples below illustrate how the co-text helped to define the emotion terms classified as [surprise] and [inclination] – neutral in isolation as positive. INSCRIBED AFFECT is in **boldface** type and positively valued propositions in the co-text are in *italics*.

Example 1:

"In the morning, just as he was about to sit down to work, he saw the two shoes standing quite finished on his table. He was **astounded** [surprise +], and did not know what to make of it. He took the shoes in his hands to look at them more closely and *he saw that they were so neatly made that there was not one bad stitch in them*. It was just as if *they were intended as a masterpiece*." (Extract from "The elves and the shoemaker")

Example 2:

"...his whole court came and **wished** [inclination: desire +] *her happiness* in her marriage with King Thrushbeard, and *the joy now began in earnest*. (Extract from "King Thrushbeard")

Positive and negative valence becomes more relevant in the present study when the different phonetic realizations of AFFECT subtypes are confronted in the Discussion chapter.

V.1.1.3 The lexicogrammatical realization of AFFECT subtypes

AFFECT was analysed in terms of its realization considering the emotion terms found in the fairy tales that were studied. The emotion terms were divided as regards their lexicogrammatical realization (See Table 5.3).

Table 5.3

Lexicogrammatical realization of AFFECT

Sample emotion terms	Lexicogrammatical realization
merry, glad (4), unhappy (3), sad, miserable, grateful, delighted (2), angry, comforted, ashamed, afraid, horror struck, puzzled, astounded, astonished	Adjectives (21): affect as 'quality'
rejoiced, pitied, please, pleases, pleased (2), wished, liked	Verbs (8): affect as 'process' affective mental
laughed, danced (2), leaped, skipped, weep (3), wept, cry, cried (3), crying (2), shuddered, shrank	Verbs (17): affect as 'process' affective behavioural
joy, anger, rage, fear (2), misfortune, astonishment, hope, love	Nouns (9): affective grammatical metaphor, nominalized realization of qualities
bitterly	Adverbs (1): affect as 'comment'

Note. This table follows the lexicogrammatical distinctions mentioned in Martin & White (2005, p.46). The number of instances is shown between parentheses (). Unless otherwise indicated, there was one instance.

Interjections which were considered to be loaded with AFFECT were also taken as part of the analysed data. These include the words "Ah", "Ha" and "Alas".

Up to this point, this chapter has described all the results obtained as regards the qualitative data analysis of the written text drawing on one sub-system of APPRAISAL: AFFECT. The next part of this first section explores the relation between the written – linguistic – expressions of AFFECT and their oral –non-linguistic– realization. Each AFFECT category is described in terms of the storyteller's phonetic choices following the phonetic taxonomy designed for the analysis of *emotional speech* in the present study.

V.1.2 Emotional speech: phonetic realization of emotion talk

Seven suprasegmental phonetic variables were considered for the analysis of *emotional speech*: pitch height, pitch range, pitch direction, loudness, tempo (on stretches and syllables), precision and pause. Paralinguistic features were also analysed as regards three groups of features: voice quality, vocal effects and voice qualifications. See Chapter II, Section 2 for a detailed description of each phonetic variable and its nominal values. The results for these variables are presented following the order in which they were obtained: first perceptual and then acoustic. The correlation between the perceptual and acoustic results is also reported.

V.1.2.1 Perceptual suprasegmental results

Table 5.4 shows the descriptive statistical percentages resulting from the association of the seven descriptive AFFECT subtype categories and the values obtained for the seven most relevant suprasegmental phonetic variables. After a preliminary perceptual analysis, the fifty-two clauses were divided into ninety-eight tone units. These tone units were then taken as the unit of analysis for a detailed perceptual and acoustic analysis.

Table 5.4

AFFECT type	Pitch	Pitch range	Pitch	Loudness	Tempo		Precision
and subtype	height %	%	direction %	%	stretches %	syllables %	%
98 tone units							
dissatisfaction:	H: 90.5	W: 76.2	F: 76.2	Ld: 90.5	Fa: 42.9	Un: 71.4	Pr: 81
displeasure	M: 9.5	Un: 14.3	RF:19	Mod: 19.5	Mod: 38.1	Dr: 28.6	Un: 19
21 tone units	L: 0	N: 9.5	Lev: 4.8	S: 0	Sl: 19	Cl: 0	Slu: 0
insecurity:	H: 4,8	W: 23.8	F: 81	Ld: 4.8	Fa: 42.9	Un: 66.7	Pr: 85.7
disquiet	M: 33.3	Un: 0	RF: 14.2	Mod: 19	Mod: 23.8	Dr:33.3	Un: 14.3
21 tone units	L: 61.9	N:76.5	FR: 4.8	S: 76.2	Sl: 33.3	Cl: 0	Slu: 0
happiness:	H: 40	W: 40	F: 70	Ld: 45	Fa: 30	Un: 70	Pr: 65
cheer	M: 40	Un: 0	RF: 15	Mod: 55	Mod: 65	Dr: 30	Un: 35
20 tone units	L: 20	N: 60	R: 5	S : 0	Sl: 5	Cl: 0	Slu: 0
			FR: 5				
			Lev: 5				
satisfaction:	H: 53.8	W: 69.2	F: 61.5	Ld: 23.1	Fa: 30.8	Un: 92.3	Pr: 69.2
pleasure	M: 38.5	Un: 15.4	RF: 23.1	Mod:69.2	Mod:53.8	Dr: 7.7	Un: 30.8
13 tone units	L: 7.7	N: 15.4	FR: 15.4	S: 7.7	Sl: 15.4	Cl: 0	Slu: 0
unhappiness:	H: 0	W: 7.7	F: 84.6	Ld: 15.4	Fa: 38.5	Un: 84.6	Pr: 61.5
misery	M: 0	Un: 0	RF: 7.7	Mod:61.5	Mod:53.8	Dr: 15.4	Un: 38.5
13 tone units	L: 100	N: 92.3	L: 7.7	S: 23.1	Sl: 7.7	Cl: 0	Slu: 0
happiness:	H: 20	W: 80	F: 40	Ld: 20	Fa: 60	Un: 80	Pr: 80
affection	M: 60	Un: 0	R: 40	Mod: 0	Mod: 40	Dr: 20	Un: 20
5 tone units	L: 20	N: 20	FR: 20	S: 80	S1: 0	Cl: 0	Slu: 0
surprise	H: 60	W: 100	F: 60	Ld: 40	Fa: 60	Un: 40	Pr: 100
5 tone units	M: 20	Un: 0	RF: 40	Mod: 60	Mod: 40	Dr: 60	Un: 0
	L: 20	N: 0		S : 0	S1: 0	Cl: 0	Slu: 0

Relation between AFFECT and perceptual phonetic features

Note. H = high, M = mid, L = low; W = wide, Un = Unmarked, N = narrow; F = fall, RF = rise-fall, R = rise, FR = fall-rise, Lev = level; Ld = loud, Mod = moderate, S = soft; Fa = fast, Sl = slow; Cl = clipped, Dr = drawled; Pr = precise, Slu = slurred. Main tendencies in**boldface**type
As can be seen from the percentages displayed in Table 5.4, each AFFECT subtype shows certain tendencies, written in **boldface** type in the table, as regards each phonetic variable it is associated with. For example, the AFFECT subtype: [dissatisfaction: displeasure] is associated with high pitch (90.5%), wide pitch range (76.2%), falling pitch direction (76.2%), loud volume (90.5%), moderate to fast tempo in stretches (38.1% & 42.9%), unmarked tempo in syllables (71.4%) and precise articulation (81%). These tendencies will be discussed in detail in Chapter VI, *Discussion*.

In the case of the phonetic feature of *pause*, all cases found coincided with grammatical boundaries. No instances of *pause* were identified as relevant for the oral expression of emotion in the oral samples analysed. Therefore, no results are reported.

V.1.2.2 Acoustic measures of frequency, amplitude and duration

Once the perceptual analysis was complete, the tone units were studied by means of PRAAT. Descriptive statistical tests were run on the data obtained and the results appear to be consistent, in most cases, with the perceptual tendencies. The next section reports on this consistency. Table 5.5 shows the acoustic measures of frequency, amplitude and duration per AFFECT subtype. It shows the values observed for each AFFECT subtype as regards the mean, median and standard deviation so as corroborate the perceptual tendencies suggested in Table 5.4. For example, in the case of [dissatisfaction: displeasure] the pitch height mean (352 Hz), median (348 Hz) and standard deviation (82 Hz) coincide with the fact that this AFFECT subtype was perceptually categorized as high in 90.5% of the cases; its pitch range mean (146 Hz), median (151 Hz) and standard deviation (64 Hz) corroborate its perceptual categorization as wide in 76.2% of the sample; its loudness values (74 dB) and standard deviation (2 dB), its volume appreciation as loud in 90.5% of the cases; and its tempo in stretches gives varied results just as the perceptual data.

Table 5.5

Relation between AFFECT and acoustic measures of frequency, amplitude and duration

AFFECT type and subtype	Measures ⁵³	Frequency (pitch height) Hz	Frequency (pitch range) Hz	Amplitude (loudness) dB	Duration (tempo in stretches) syllables per s
dissatisfaction:	М	352	146	74	3
displeasure	Mdn	348	151	74	4
	SD	82	64	2	.81
insecurity:	М	254	78	68	4
disquiet	Mdn	233	64	67	4
	SD	61	55	2	1
happiness: cheer	М	309	117	71	4
	Mdn	233	67	71	4
	SD	157	135	4	1
satisfaction:	М	282	128	70	4
pleasure	Mdn	290	128	70	4
	SD	63	66	1	.79
unhappiness:	М	227	53	71	4
misery	Mdn	213	48	69	4
	SD	32	33	3	.93
happiness:	М	309	167	71	4
affection	Mdn	324	209	71	5
	SD	60	82	2	1
surprise	М	301	155	69	5
	Mdn	290	180	69	4
	SD	63	56	-	.89

Note. s = second.

The acoustic mean and median also help to identify any relevant variation in the measures. This is the case of [happiness: cheer], which presents important differences in these values for pitch height (309 and 233 Hz) and pitch range (117 and 67Hz). This

⁵³ As stated in Chapter IV Section IV.2.2.2, whereas frequency and amplitude measures were taken with the tone unit as unit of analysis, duration was measured in terms of syllables per seconds (s). For reasons already stated in Chapter IV only the measures obtained for Rumpelstiltskin were used for the quantitative corroboration of loudness. Only one case was observed for [surprise] in Rumpelstiltskin and therefore no standard deviation value is reported.

variation is clearly signalled by the standard deviation results: SD 157 Hz for pitch height and SD 135 Hz for pitch range which suggest a rather fluctuant realization of this emotion on the part of the storyteller. Chapter VI contains a possible explanation to this fact. An explicit comparison between perceptual and acoustic results is presented next.

V.1.2.3 Perceptual and acoustic correlation results

Perceptual results were correlated with acoustic measures for four phonetic variables: pitch height (frequency measures), pitch range (frequency measures), loudness (amplitude measures) and tempo (duration measures). Most perceptual tendencies detailed in Table 5.4 were corroborated by the acoustic measures extracted from PRAAT presented in Table 5.5. Duration measures for stretches were consistent for all AFFECT subtypes with 4 syllables per second in most cases and therefore results are not further explored. A possible explanation for this relative constant speed of delivery is worth mentioning however. The number of syllables produced by a speaker per second affects the intelligibility of speech; it is reasonable to suggest that reading fairy tales aloud to an audience of children requires a careful and moderate tempo for the sake of clarity. The comparison between perceptual and acoustic results of the other three phonetic variables is illustrated in Figures 5.1, 5.2 and 5.3.



Figure 5.1 - Perceptual and acoustic measures comparison for pitch height. Perceptual nominal values are shown between parentheses ().



Figure 5.2 – *Perceptual and acoustic measures comparison for pitch range.* Perceptual nominal values are shown between parentheses ().



Figure 5.3 – *Perceptual and acoustic measures comparison for loudness*. Perceptual nominal values are shown between parentheses ().

Figures 5.1, 5.2 and 5.3 show the acoustic media and median for pitch height, pitch range and loudness measures as well as the perceptual nominal values with the highest percentages between parentheses. Perceptual results are validated in most cases by the numerical measures. The results described up to now indicate stable tendencies which have been corroborated acoustically. This corroboration of perceptual outcomes increases the reliability of the phonetic profiles suggested in Chapter VI, Section VI. 1.2.

V.1.2.4 Paralinguistic features perceptual results

The perceptual results in relation to *paralinguistic features* are presented in Table 5.6. Only twenty-seven tone units of the ninety-eight analysed were marked with one or more of the three types of paralinguistic features described in Chapter II, Section 2: *voice quality* (23 instances), *vocal effects* (7 instances) and *voice qualifications* (1 instance).

Table 5.6

AFFECT type and subtype	Paralinguistic features						
	Voice quality	Vocal effects	Voice qualifications				
dissatisfaction: displeasure	rough (2) creak (2) breathy (1) glottal attack (7)	breath-in (4)					
insecurity: disquiet	creak (1) breathy (1)	breath-in (1)	tremulous (1)				
happiness: cheer	creak (2) glottal attack (2)						
satisfaction: pleasure	glottal attack (1)						
unhappiness: misery	rough (1) glottal attack (2)	breath-in (1)					
happiness: affection		breath-in (1)					
surprise	glottal attack (1)						

Relation between AFFECT and paralinguistic features based on perceptual analysis

Note. The number of instances is written between parentheses ().

Table 5.6 includes all the instances of paralinguistic features observed per AFFECT type. It already reveals tendencies as to which emotions appear to be more heavily marked by the use of paralinguistic features in the sample of fairy tales studied. The results displayed in this table indicate that [dissatisfaction: displeasure] contains the most occurrences (16 out of 31). A possible explanation for this tendency is suggested in Chapter VI, Section VI.1.2.2.

In brief, section 1 has presented all the results that addressed the first research question postulated for this study. The results have established a clear association between the written realization of the semantics of affect and its phonetic realization. It seems reasonable to suggest the possibility of describing each AFFECT subtype analysed here in terms of phonetic profiles. These profiles include a detailed description of the perceptual features observed for each emotion which have been acoustically corroborated when possible. This association will be discussed in detail in Chapter VI. The next section presents the results on the association of the written semantics of intensification and the four phonetic variables which can be acoustically measured: pitch height and range, loudness and tempo. With this purpose in mind, it combines some results described in section 1 with new variables derived from the system of GRADUATION.

Section 2

Section two informs the results obtained on the association between the written semantics of intensification⁵⁴ of INSCRIBED AFFECT and four phonetic variables: pitch height and range, loudness and tempo⁵⁵ (See Chapter IV, Section 4.1 for methodological details). The section is divided into three parts. The first part describes the results obtained as regards the different realization modes of intensification: infused graders, isolating graders and repetition (Martin & White, 2005; Macken-Horarik & Isaac, 2014) and it relates them to the phonetic variables mentioned before. The second part deals with degrees of intensification suggested by Martin and White (2005): low, median and high, and it shows how they are related to the phonetic realization of AFFECT as regards pitch height, pitch range and loudness. Finally, the third part, proposes an inventory of all the expression strategies displayed for the realization of GRADUATION observed in the sample (See Table 5.11). It also presents a case analysis to illustrate a possible association between the different expression strategies of GRADUATION observed in the present study and phonetic variables: pitch height and range, loudness and tempo.

⁵⁴ In the corpus analysed intensification is used only to up-scale the semantic meanings of emotion terms. Most of the instances analysed are inclined towards the higher end of the cline. No instance of down-grading was found. The exploration of these results falls out of the focus of this study.

⁵⁵ These four phonetic variables have been chosen because they have been analysed both perceptually and acoustically. This allows for a comparison between the results obtained for INSCRIBED AFFECT and graduated INSCRIBED AFFECT in terms of both perceptual tendencies (e.g. high versus higher) and numerical measures (e.g. in Hz).

V.2.1 Modes of intensification

Three modes of intensification: infused graders (unhappy ^ miserable), isolating graders (glad ^ very glad) and repetition ("The devil told you that! The devil told you that!") were studied and associated with their phonetic realization. (See Appendix D for details.) Results indicate preliminary tendencies of association between all modes of intensification in general and an amplified use of phonetic resources.

V.2.1.1 Infused graders

An initial descriptive analysis of the different modes of intensification places infusion as the most frequent realization used in the sample (96% of INSCRIBED AFFECT instances are infused). Table 5.7 shows the descriptive statistical percentages resulting from a comparison between the phonetic realization of AFFECT and the one for infused graders. See Appendix H for detailed information as regards each case analysed.

Table 5.7

Infused inscribed AFFECT type	Tendencies	Pitch height	Pitch range	Loudness	Tempo stretches
	Perceptual:	high	wide	loud	fast
dissatisfaction: displeasure - anger	Numerical mean:	352 Hz	146 Hz	kth: 71 dB, rum: 74 dB, elsh: no cases	3 syllables per second
(4 cases)	Infusion intensification:	75% higher 25% lower	100% wider	75% louder 25% softer	100% faster
	Perceptual:	low	narrow	soft	fast
insecurity: disquiet - fear	Numerical mean:	254 Hz	78 Hz	kth: 65 dB, rum: 68 dB, elsh: 65 dB.	4 syllables per second
(10 cases)	Infusion intensification:	100% lower	90% narrower 10% wider	100% softer	40% faster , 30% same, 30% slower.
	Perceptual:	high	wide	moderate	moderate
satisfaction: pleasure	Numerical mean:	282 Hz	128 Hz	kth: 66 dB, rum: 70 dB, elsh: 64 dB.	4 syllables per second
- pleasure (4 cases)	Infusion intensification: 100% higher		75% wider 25% same	50% softer 25% same 25% louder	75% same 25% slower
	Perceptual:	low	narrow	moderate	moderate
unhappiness: misery - sadness (5 cases)	Numerical mean:	227 Hz	53 Hz	kth: 68 dB, rum: 71 dB, elsh: no cases	4 syllables per second
	Infusion intensification:	60% lower 20% same 20% wider	60% narrower 40% wider	60% softer 40% louder	80% same 20% slower

Relation between infused graders and pitch height, pitch range, loudness and tempo

Note. syl= syllables, kth = King Thrushbeard, rum = Rumpelstiltskin, elsh = The elves and the shoemaker. Main tendencies in **boldface** type.

A preliminary analysis of the figures depicted in Table 5.7 reveals a systematic association between the written semantics of intensification and the phonetic variables studied as most frequencies obtained have good prediction value with percentages above 65% (11 out of 16 comparisons). A detailed discussion of this correlation is offered in Chapter VI, Section 2.

V.2.1.2 Isolating graders

Regarding the isolating mode as intensification, only 23% of the complete corpus of INSCRIBED AFFECT was amplified via one or more isolated lexemes. Only one set of examples of [satisfaction: pleasure - pleasure] was analysed phonetically as illustrated in Table 5.8. These examples were chosen as they show the same emotion term being intensified first by one isolating lexeme (e.g. well), and then by a combination of two isolating lexemes (e.g. so well). Analysing the same emotion term makes a comparison between tone units feasible and easier to determine. Table 5.8 shows the relation between the use of isolating graders and their phonetic realization.

Table 5.8				
Relation between	isolating graders	and pitch height,	pitch range, l	oudness and tempo

Isolating graders	Tendencies	Pitch Height	Pitch Range	Loudness ⁵⁶	Tempo
satisfaction: pleasure	Perceptual tendency:	high	wide	moderate	moderate
-pleasure	Numerical mean:	282 Hz	128 Hz	kth: 66 dB, rum: 70 dB.	4 syl per second
"That is an art which pleases me <i>well</i> ." (rum)	Isolating intensification:	290 Hz higher	189 Hz wider	70dB no difference	4 syl per second no difference
"your song has pleased me <i>so well</i> " (kth)	Isolating intensification:	311 Hz higher	128 Hz wider	68 dB. louder	4 syl per second no difference

Note. syl= syllables, kth = King Thrushbeard, rum = Rumpelstiltskin. Main tendencies in **boldface** type.

The results reported in this table suggest the existence of an association between the written and oral intensifying resources. Considering the phonetic values obtained for [satisfaction: pleasure - pleasure] and comparing them with the ones given to the isolating intensified cases, the association could be stated as follows: the presence of isolating resources of intensification may predict an amplified realization of the phonetic

⁵⁶ These two examples were taken from two different fairy tales and thus the comparison of loudness has to be done in relation to two different means.

characteristics of the emotions expressed (e.g. the realization of pitch height is higher when the emotion term is intensified).

V.2.1.3 Repetition

Repetition of the same item/s (as in "The devil told you that! The devil told you that!"), or of related lexemes (as in "weep and cry") appears to be the resource that was used the least in the corpus, only 5 cases were identified (10% of the instances). The association between repetition and its phonetic counterpart is presented in Table 5.9. This table describes the phonetic realization of 3 cases. The first 2 cases show the repetition of 2 complete phrases divided in a number of tone units (TU) and the third case the repetition of a related term realized in one tone unit. The measures described in the table were taken from tone units⁵⁷ containing repetition. They were measured and compared to the phonetic profiles of AFFECT (perceptual and numerical means described in Section 1 of this chapter – Tables 5.4 and 5.5 as well as Figures 5.1, 5.2 and 5.3).

⁵⁷ See Appendix G (PRAAT images of AFFECT instances) for details.

Table 5.9

Repetition cases	Tendencies	Pitch height	Pitch range	Loudness	Tempo stretches
dissatisfaction:	Perceptual:	high	wide	loud	fast
displeasure -anger	Numerical mean:	352 Hz	146 Hz	kth: 71 dB, rum: 74 dB	3 syl per s
Case 1: "Ah, unhappy girl	Repetition:	TU1: 410 Hz	TU1: 143Hz	TU1: 74 dB	3 syl per s
that I am!"		TU2: 453 Hz	TU2: 251 Hz	TU2: 74 dB	5 syl per s
Repetition (3 TU):		TU3: 378 Hz	TU3: 177 Hz	TU3: 76 dB	
TU1 Ah,					
TU2 unhappy girl		TU4: 487 Hz	TU4: 191 Hz	TU4: 73 dB	4 syl per s
TU3 that I am (kth)					2 syl per s
Case 2 "The devil told you that!"		100% higher	75% wider	75% louder	50% faster
Repetition (1 TU):			25% narrower	25% softer	25% no difference
TU4 <i>The devil told you that!</i> (rum)					25% slower
insecurity:	Perceptual:	low	narrow	soft	fast
disquiet - fear	Numerical mean:	254 Hz	78 Hz	rum: 68 dB.	4 syl per s
Case 3 (1 TU):	Repetition:	TU1: 217 Hz	TU1: 89 Hz	TU1: 66 dB	2 syl per s
"Then the queen began to weep and <i>cry</i> (repeated related lexeme)" (rum)		lower	wider	softer	slower

Relation between repetition and pitch height, pitch range, loudness and tempo

Note. TU= tone unit, syl = syllables, s = second, kth = King Thrushbeard, rum = Rumpelstiltskin. Main tendencies are shown in **boldface** type. Repetition is in *italics*.

The comparison of the intensified units by means of repetition and the tendencies per AFFECT results in clear tendencies with good and strong prediction value for 3 of the variables in cases 1 and 2. Case 3 shows the correspondence between written graduated AFFECT and the amplification of the typical phonetic traits of pitch height, pitch range and loudness but not of tempo.

To summarize the outcomes obtained on the different modes of intensification, it could be mentioned that regardless of the mode of intensification selected, written intensification is realized phonetically. The typical phonetic realization of INSCRIBED AFFECT (suggested as phonetic profiles in the present study) is amplified (e.g. from high to higher) when affect is intensified verbally by means of any of the three modes described by Martin and White (2005). These points will be discussed in more detail in Chapter VI,

Discussion. The next part of this section presents the results related to the degree of intensification of graded terms and their phonetic realization.

V.2.2 Degrees of intensification

Emotions and thus emotion terms are characterized by their gradability. The following results aim at showing how the degrees of intensification: low⁵⁸, median and high associated to the expression of AFFECT relate with the phonetic variables of pitch height, pitch range and loudness⁵⁹.

As explained in Chapter II, Martin and White (2005) illustrate the gradability of attitudinal meanings by means of a cline of intensity which shows two types of realization of GRADUATION: inherently intense lexis and individual items setting up the intensity level. The first group of examples provided by the authors are qualities or mental processes with infused intensification that can be positioned along a continuum from low to high degree of gradability – contentedly ^ happily ^ joyously ^ ecstatically. Within this group in which the semantics of GRADUATION is infused in the lexeme, a special set of processes has been identified. The present study has also analysed behavioural processes as gradable. It seems reasonable to consider that the physical manifestation of gradable attitudinal meanings can also express different degrees of intensification. A continuum from low to high degree of intensity could be suggested, for example, for the different ways in which people shed tears because they are sad: snivel/whimper ^ cry ^ weep ^ sob. The second group of examples presented by Martin and White graduate the same emotion term by means of isolating resources which show different degrees of intensity inherently – slightly upset ^ somewhat upset ^ very upset ^ extremely upset. A larger sample of gradable physical manifestations would allow for more precise generalizations about the possibilities of grading behavioral processes.

Drawing upon this cline of intensity Table 5.10 presents the results of the analysis of three examples of [satisfaction: pleasure] infused processes which are also amplified by

⁵⁸ No *low* cases were identified and thus this extreme pole of the cline is not shown.

⁵⁹ The phonetic variable of *tempo* is not reported in the results as it showed no meaningful variation in the cases used in this section. An interpretation of this phenomenon is provided in the next chapter.

means of isolated lexemes. The phonetic realization of these cases is also displayed in Table 5.10. The interpretation of these results is included in Chapter VI, Section 2.

Association between degree of intensity and pitch height, pitch range and loudness								
	Cline of	intensity	Pitch height	Pitch range	Loudness ⁶⁰			
satisfaction:	high							
pleasure	\wedge	"and delighted (rum)"	366 Hz	238 Hz	69 dB			
- pleasure		(inherently high intense ⁶¹ process)						
1		"Your song has pleased me so well(kth)"	311 Hz	128 Hz				
		(infused process + double isolation)						
		"That is an art which pleases me well. (rum)"	290 Hz	189 Hz	70 dB			
	\checkmark	(infused process + isolation)						
	median							

Note. rum = Rumpelstiltskin, kth = King Thrushbeard. Emotion terms are shown in **boldface**.

As can be seen in Table 5.10, the resources with which GRADUATION can be instantiated are varied and seem to go beyond those exemplified by Martin and White's (2005) cline of intensity especially if the combination between resources is considered. The next part of this chapter presents the results obtained in the present study organized in an inventory which includes the different expression strategies used to intensify affect as well as the possibility to combine them.

V.2.3 Expression strategies of intensification

Table 5.10

V.2.3.1 Written – lexicogrammatical and graphological – realization

In the corpus of this study, intensification is realized by means of different strategies. Some of these resources are included as part of the GRADUATION system suggested by Martin and White (2005):

⁶⁰ Only those extracts belonging to the same fairy tale are comparable as regards loudness for reasons stated in Chapter IV, footnote 43.

⁶¹ Terminology borrowed from Martin & White (2005, p. 245).

- infusion of qualities (congruent realization explicitly mentioned by Martin & White, 2005). Infusion was also observed in behavioural processes, nominalized qualities and interjections in this corpus;
- isolating intensifiers realized as adverbs (described by Martin & White, 2005) and also as prepositional phrases in this sample;
- repetition.

Other resources, however, were observed as intensification devices in the sample of fairy tales studied: *exclamations* and *fronting*. Where to place these resources which are not accounted for in the GRADUATION system became an interesting challenge. Moreover, the data analysed contained instances in which expression strategies were combined. How to account for the potential of combination of written verbal intensifying resources was also considered a key issue to report in this study.

The different strategies for the expression of intensification have been displayed in Table 5.11. This study suggests that they can be regarded as an inventory of resources at the speaker or writer's disposal for the expression of intensification. Even though these resources were tested in terms of groups and subgroups according to more delicate distinctions, and were also tested in a system network which worked fairly well, the results are presented as an inventory in Table 5.11 and not as a system network as the sample analysed is reduced. A detailed analysis of a bigger corpus is necessary to check these descriptive theoretical observations and to capture them in a rigorous network.

Table 5.11

Inventory of written verbal expression resources for graduation – intensification in the sample

	writt	en verbal GRA	DUATION resources for intensif	ïcation
Single				Combined
denoting	infusing	congr incon	uent: e.g. adjectives (<i>angry</i>) ⁶² gruent: e.g. nouns (<i>anger</i>)	e.g. "I shall be <i>very</i> glad to do it." (median-high intensity infused adjective up-scaled by grammatical isolation)
	isolating	gramr lexica	natical: e.g. adverbs (<i>very</i>) l: e.g. adverbs (<i>bitterly</i>)	e.g. "Then she wept <i>bitterly</i> " (median-high intensity infused behavioural process
signalling	repeating: " <i>T</i> / showing: beha placing: foreg exclaiming	he devil told you t avioural processes rounding (<i>Glad a</i> grammatical orthographical (hat! The devil told you that!" s (shuddered) m I) exclamative (How glad am I) interjection (Alas) (The devil told you that!)	 Inflused behavioural process verb up-scaled by lexical isolation) e.g. "Then they <i>danced</i> and <i>skipped</i> and <i>leaped</i> over chairs and benches." (medianto high inflused behavioural process verbs up-scaled by repetition) e.g. "<i>Glad am I</i>" (median-high intensity inflused adjective up-scaled by fronting)

The inventory suggested in Table 5.11 reflects all the written verbal expression strategies and their lexicogrammatical realizations used to intensify INSCRIBED AFFECT in the sample texts studied. The following aspects are represented in the table:

- Most importantly, it captures the very productive and frequently observed choice that speakers have of combining *single* resources of GRADUATION including the *combined* option in the list. In this way, the "cumulative nature of interpersonal meanings" is presented in the inventory of GRADUATION resources (Thompson, 2004, p. 68).
- It also proposes two new categories: *denoting* and *signalling* to show the different degree of explicitness with which speakers can express intensification.
- It keeps Martin and White's (2005) distinction between *infusing* and *isolating* resources with their respective lexicogrammatical realizations.

 $^{^{\}rm 62}$ All examples were extracted from the stories studied.

- It incorporates the notion of *showing* intensification by means behavioural processes.
- And finally, it includes two new resources: *placing* and *exclaiming*,

A more detailed description and explanation of this inventory is provided in Chapter VI, Section 2.

The questions that remain are related to how this great variety of resources instantiate the degree of intensification and how this interacts with the phonetic realization of GRADUATION. Do speakers assign a greater degree of phonetic intensification to one type of realization rather than another or to *combined* resources instead of *single* ones? One specific case in the corpus, the varied intensification of the emotion term 'glad', seems to have enough variation so as to suggest a preliminary answer.

V.2.3.2 Case analysis: relation between expression resources and the written and oral degree of intensification

The emotion term 'glad' [happiness: cheer] is used 4 times in the fairy tales studied. Considering the inventory presented in Table 5.11, 'glad' is classified as an instance of a *single, denoting, infusing, congruent* resource for GRADUATION as it is a median to high inherently intensified quality. Only the first example analysed presents this inherent intensifying property of the word 'glad' as the only intensifying resource. The rest of the cases show this resource in combination with other strategies. These different expression strategies observed in the texts studied can be organized along a cline that moves from a lower to a higher degree of intensity.

As stated before, in the first case analysed, "for the people were glad", GRADUATION is realized by a *single, denoting, infusing, congruent* resource and is placed at the lower end of cline of intensity. In the second case, "I shall be very glad to do it", this inherent property of 'glad' is combined with a *grammatical isolating* resource and therefore, is positioned in the cline as having a higher degree of intensity. The third case, "how glad the queen was!", can be classified as containing a median-high inherently intensified quality up-scaled by a *signalling exclaiming* resource; 'glad' is uttered in an *exclamative*

grammatical form marked *orthographically* as well. The combination of resources instantiating GRADUATION in case 3 strengthens the intensification and thus this example is placed higher than case 2 in the cline. Finally, in the last case analysed, "Glad am I", the inherently intensified nature of the word 'glad' appears in combination with a *signalling* resource: *foregrounding placing* and it is given the highest place in the cline of intensity. The rationale underlying this classification is explained in detail in Chapter VI, Section VI.2.1.3.3.

Once the written strategies for GRADUATION were organized along a cline of intensity, a phonetic analysis was carried out to examine a possible correlation between the written resources of GRADUATION and the phonetic variables of pitch height, pitch range, loudness and tempo. Table 5.12 presents the results obtained for each appearance of the word 'glad'.

Table 5.12

Expre	ssion strategies ordered from lower	Phonetic description	Pitch height	Pitch range	Loudness	Tempo stretches
to higher degree of intensification 'glad' [happiness: cheer]		Perceptual profile	mid-high	narrow	moderate- loud	moderate
		Acoustic mean for happiness: cheer	309 Hz	117 Hz	rum=71dB kth= 66dB elsh=66dB	4 syl per s
low	Case 1:"for the people were glad "	Perceptual:	low	narrow	moderate	fast
$\left \right. \right $	(kth) (single median-high congruent infused quality)	Acoustic measure:	219 Hz	26 Hz	67 dB +1 dB	6 syl per s
	Case 2: "I shall be very glad to do	Perceptual:	mid	narrow	moderate	fast
	it. (eisn) (single median-high congruent infused quality + grammatical isolated grader)	Acoustic measure:	195 Hz	42 Hz	67 dB +1 dB	4 syl per s
	Case 3: "how glad the queen	Perceptual:	high	wide	loud	moderate
	(single median-high congruent infused quality up-scaled by exclamation)	Acoustic measure:	318 Hz	138 Hz	74 dB +3 dB	4 syl per s
\downarrow	Case 4: "Glad am I" (rum) (single median-high congruent	Perceptual:	high	wide	loud	moderate (drawled)
high	infused quality up-scaled by foregrounding)	Acoustic measure:	769 Hz	622 Hz	75 dB +4 dB	2 syl per s

'Glad': degrees of intensity realized by written expression resources and phonetic features

Note. syl= syllables, s = second, rum = Rumpelstiltskin, kth =King Thrushbeard, elsh = The elves and the shoemaker. Emotion terms in **boldface**. Isolating graders in *italics*.

The results show that, at least for this sample case, there is a linear correlation between the written and the phonetic degree of intensity: the higher the written strategy degree, the greater the intensity of the phonetic values obtained. In the case of pitch height, pitch range and loudness, the correlation is positive whereas it is negative for tempo. According to these results, the cumulative nature suggested in this study for GRADUATION meanings is, in fact, also realized phonetically.

Pearson correlation tests were run with SPSS to corroborate the degree of association between the written and phonetic variables. These linear correlations, however, did not render statistically significant results for the Pearson correlation test as p values were not lower than 0.05:

Pearson correlation between degree of lexicogrammatical intensification and

- o pitch height: r(2), +.85, p = 0.14.
- o pitch range: r(2), +.86, p = 0.13.
- o loudness: r(2), +.94, p = 0.05.
- tempo: r(2), +.94, p = 0.05.

However, the Pearson test does not invalidate the theoretical observations suggested in this study. It does point out the need for a bigger sample. Chapter VI presents a discussion of these results.

Section 2 has presented the results aimed at answering the second question guiding this study. There appears to be a clear association between the written semantics of intensification and the phonetic variables studied here. Moreover, an inventory of the different expression strategies for GRADUATION – intensification has been proposed as a descriptive theoretical outcome derived from the data analysed. A possible association between a cline of intensity of the written and oral resources of intensification has also been described.

As a general summary of this chapter, it is worth mentioning that the results presented pinpoint fairly systematic tendencies in the sample of fairy tales studied as regards the association between AFFECT and its suprasegmental and paralinguistic realization as well as between the written semantics of intensification and the phonetic variables analysed. In addition, some observations related to the written verbal resources available for speakers to graduate AFFECT did not seem to have been captured in previous descriptions so an inventory of resources has been proposed. This inventory could result, in turn, in a system network once a larger sample of texts is studied so as to make more solid generalizations. The next chapter presents the interpretations of the results described above.

CHAPTER VI

DISCUSSION

As has already been stated in Chapter I, the purpose of this study is to analyse, describe and explain the expression of emotions in the fairy tales selected. The written – linguistic – expression is studied drawing on the system of APPRAISAL – AFFECT and GRADUATION; the oral –non-linguistic – expression is described following an adaptation of Roach et al.'s (1998) phonetic taxonomy. In so doing, the association between both types of expression is described and explained. This description has a specific context of application in mind and therefore the study also explores the pedagogical implications of the association between the written and oral expression of emotions when reading aloud fairy tales at the University of La Pampa EFL teacher training program. Pedagogical implications will be shared in Chapter VII.

This chapter discusses the key findings already reported in Chapter V and attempts to interpret and explain these results drawing upon the theoretical framework described in Chapter II and the previous research reported in Chapter III. It is organized in two main sections.

Section 1

VI.1 Research question 1: discussion of results

This section deals with the results obtained that address the following research question:

How does INSCRIBED AFFECT in the fairy tales analysed relate to the suprasegmental and paralinguistic features selected by the storyteller to express those emotions orally? In order to establish a relation between *emotion talk* and its phonetic realization in the corpus examined, INSCRIBED AFFECT was analysed in detail first. These results are discussed in Section VI.1.1. Next, Section VI.1.2 describes the oral realization of INSCRIBED AFFECT as phonetic profiles.

The most relevant findings as regards the emotion terms categorized as INSCRIBED AFFECT in the corpus selected are described next.

VI.1.1 Written realization of INSCRIBED AFFECT – type and subtype

This study analysed INSCRIBED AFFECT in a corpus of fairy tales written by the Brothers Grimm and read aloud by an expert storyteller trained at a prestigious British school of speech and drama⁶³. The results were interpreted in terms of the type and subtype of INSCRIBED AFFECT observed.

The results indicate that the fairy tales studied contain a total of 55 emotion terms classified in the text into the 5 major types of emotions suggested by Bednarek (2008) further subdivided into 9 different INSCRIBED AFFECT subtypes. Considering the frequency of occurrence of each individual AFFECT subtype, only 7 have a significant frequency (at least 5% of the cases). From highest to lowest, those 7 subtypes are: [insecurity: disquiet] (23.6%), [happiness: cheer] (18.2%), [dissatisfaction: displeasure] (14.6%), [satisfaction: pleasure] (12.7%), [unhappiness: misery] (12.7%), [happiness: affection] (7.3%) and [surprise] (5.5%).

With these outcomes in mind, [insecurity: disquiet] is the most recurrent AFFECT subtype observed in the texts and thus feelings related to "ecosocial wellbeing" (Martin & White, 2005, p. 49) portraying fear, in the case of the fairy tales analysed. Emotion terms labelled as [dissatisfaction: displeasure] are significant as well in the number of occurrences observed in the sample texts. This fact highlights the generic pattern of fairy tales in which

⁶³ See Section IV.2 for details on the corpus selection procedure.

protagonists resolve conflicts or overcome crises that most certainly cause fear and anxiety (insecurity) or displeasure (dissatisfaction).

The "affairs of the heart" (Martin & White, 2005, p. 49) indicating happiness or unhappiness are also a widely spread feeling throughout the corpus analysed. The fact that un/happiness is one of the most salient emotions in the fairy tales analysed seems to be consistent with its core position in Bednarek's fuzzy system (see Chapter II, Section 1). Moreover, this finding is also in line with the common social function of story genres interpreting "life's chaos and rhythms," evaluating "each other's behaviour", and educating and entertaining children (Martin & Rose, 2008, p. 49). It seems reasonable to assume that the children's education on social values and behaviours by means of fairy tales will include plenty of examples of un/happiness as it is the first set of meanings that comes "to mind when we think about emotions" (Martin & White, 2005, p.49).

The least frequent emotions are those labelled as dis/inclination and surprise. These findings can be interpreted in the light of Bednarek's (2008) assumption "that linguistic affect is organized as a prototype category, with core, better and worse members" (p. 168). These two affect types are assigned a less core position in Bednarek's fuzzy system and thus could be considered as less relevant to be included in children's fairy tales. A larger sample, however, might provide a more solid explanation.

In brief, the most frequent subtypes are [insecurity: disquiet], [happiness: cheer] and [dissatisfaction: displeasure]. Needless to say, a greater sample could be examined in order to make finer generalizations on the distribution of AFFECT types and subtypes in fairy tales. This, however, falls beyond the scope of the present work.

Besides establishing the frequency of types and subtypes of AFFECT, the analysis conducted foregrounded the importance of considering the oral rendering of a competent speaker⁶⁴, an expert storyteller in this case, in order to interpret semantic meanings and thus define AFFECT labelling. The concrete example described in Section V.1.1.1.1 illustrates this point. The possibility of interpreting an emotion term as portraying more than one

⁶⁴ The competent speaker is chosen according to the genre of the text the teachers and students are working with. It might be a well-known news reporter, an actor, an expert storyteller, etc.

AFFECT type and subtype is captured by Bednarek's "fuzzy system, with no clear boundaries between affect types, and possible blends" (p. 167). The case of the emotion term "unhappy" labelled as unhappiness and dissatisfaction is a clear example of this blending. What is particularly interesting for the present study is the fact that the co-text and context alone were not enough for the researcher to label the type of AFFECT. It was only after the expert storyteller's oral rendering was listened to that the researcher reinterpreted the terms. It could be argued that the researcher's interpretation of the text was limited by her being a non-native speaker of English. This fact, however, far from establishing a limitation for the present study, supports the idea that in an EFL context teachers should include oral samples, when available, not only as examples of pronunciation and intonation but also as an additional source of information for the interpretation of written texts. The combination of linguistic and non-linguistic sources of information for the identification and description of attitudinal meanings can only result in a richer interpretation of interpersonal resources. Pedagogical implications of these ideas are picked up in the next chapter.

VI.1.2 Phonetic realization of INSCRIBED AFFECT

This study analysed the phonetic realization of INSCRIBED AFFECT in order to explore in detail the association between the written and oral expression of emotion in the fairy tales selected. On the basis of the results obtained it was possible to define phonetic profiles of INSCRIBED AFFECT which represent a preliminary taxonomy of the stable association between the linguistic resources denoting emotions and the non-linguistic features signalling those same emotions orally. Further research could be carried out to test whether the profiles suggested for the fairy tales studied hold for a larger sample and to complete the taxonomy with profiles for those AFFECT subtypes which were not observed in this study. The phonetic results have also been interpreted in terms of how they associate with positive and negative subtypes belonging to the same AFFECT type (dis/satisfaction and un/happiness), that is opposite valence.

VI.1.2.1 Preliminary phonetic profiles of INSCRIBED AFFECT

The results obtained as regards the suprasegmental and paralinguistic features for each subtype of INSCRIBED AFFECT found in the fairy tales analysed have been interpreted in the present study so as to develop an initial taxonomy of phonetic profiles of INSCRIBED AFFECT. These phonetic profiles are derived from the dominant tendencies of association between the perceptual phonetic nominal values⁶⁵ (acoustically corroborated when possible) and the INSCRIBED AFFECT subtypes observed (See Section V.1.2 for result details). The findings have been organized first in a chart which could be considered as a preliminary phonetic taxonomy describing the oral realization of AFFECT. Then, a more detailed interpretation of the results is presented and the features suggested in the phonetic profiles are compared and contrasted with prior research findings⁶⁶.

Table 6.1 shows these preliminary phonetic profiles that reflect the stable association between the written and oral expression of emotion. Provisional as it is, however, this taxonomy seems to constitute a useful contribution as it is the first attempt to describe the oral realization of INSCRIBED AFFECT. The findings proposed in this initial taxonomy of phonetic profiles are not to be considered definitive, with exclusive and excluding features but rather open to future reconsideration. Nevertheless, they offer the first findings resulting from the novel association of linguistic – APPRAISAL analysis tools – and non-linguistic – the phonetic taxonomy used in this study – resources to study the oral expression of emotions in fairy tales in the context of EFL. Yet, a larger sample is needed to complete and confirm these findings.

⁶⁵ Please refer to Chapter IV, Table 4.4 for an enumeration of phonetic variables and their nominal values. ⁶⁶ As stated in Chapter III, Section 1.2, most systematic work done on the vocal expression of emotion, that has been available, comes from the fields of psychology and computational linguistics (Juslin & Scherer, 2005; Roach, 2000; Roach et al., 1998; Scherer, 2003; among others), as well as from a cross-linguistic perspective (Pavlenko, 2007). There are, however, differences as regards the methodology used and the register analysed in previous research and the present study.

Table 6.1

AFFECT type and subtype		Pitch	Pitch	Pitch	Loudness	Loudness		Precision	Paralinguistic
sactype		level	range	direction	Loudiess	stretches	syllables	1 icelsion	features
dissatisfactio displeasure	on:	high	wide	falling	loud	fast to moderate	unmarked	precise	glottal attack, rough, creak, breathy, breath-in
satisfaction: pleasure		high to mid	wide	falling	moderate	moderate to fast	unmarked	precise	glottal attack
unhappiness misery	::	low	narrow	falling	moderate	moderate	unmarked	precise	glottal attack, rough, breath-in
happiness:	cheer	mid to high	narrow	falling	moderate to loud	moderate	unmarked	precise	glottal attacks
	affection	mid	wide	rising	soft	fast	unmarked	precise	breath-in
insecurity: disquiet		low	narrow	falling	soft	fast	unmarked	precise	creak, breathy, breath-in, tremulous
surprise		high	wide	falling	moderate	fast	drawled	precise	glottal attack

Preliminary phonetic profiles for INSCRIBED AFFECT subtypes

In order to provide an explanation for the selection of the phonetic features chosen for each AFFECT type, the profiles have been explained in more detail and compared to previous research when possible⁶⁷. Suprasegmental features⁶⁸ have also been classified according to their prediction value. As anticipated in Chapter IV, Section IV.3.2, the strength of the tendency of association – expressed in percentages in Table 5.4 – is considered to estimate the prediction value of each profile as having: low prediction value (below 35%), limited prediction value (35% to 65%), good prediction value (66% to 85%), and strong prediction value (over 86%). The following section presents a more detailed description of each preliminary phonetic profile which includes:

- the prediction value assigned to suprasegmental features,
- a comparison with prior research findings and,

⁶⁷ The lack of prior research in this specific area has been acknowledged and accounted for in Chapter III.

⁶⁸ Paralinguistic features are not assigned a prediction value as the number of instances is small.

• the explanation of some interesting cases observed in specific AFFECT subtypes.

The detailed description of the phonetic profiles suggested in this study is presented next. It follows the order in which they were described in Table 6.1.

1- The phonetic profile for [dissatisfaction: displeasure]⁶⁹ displays strong prediction value for two phonetic variables as 90.5% of the cases were realized with high pitch height and loud volume. The rest of the phonetic variables are classified as having good prediction value: precise articulation in 81% of the cases, wide pitch range and falling tones in 76.2%, unmarked extension of syllable tempo in 71.4%, and fast to moderate tempo in stretches (as fast: 42.9% and moderate: 38.1% together account for 81%). As regards paralinguistic features displeasure is frequently accompanied by the inclusion of glottal attacks. Moreover, voice quality is also marked by the use of rough, creaky or breathy voice. Vocal effects are also included in the form of strong inhalations or breath-in instances at tone unit boundaries. Even though no voice qualifications are observed, half of the paralinguistic features identified in the storyteller's reading (16 out of 31) are used to signal displeasure.

All cases of [dissatisfaction: displeasure] analysed portray the same typical emotion: anger. Previous research has characterized anger, hot anger or rage as expressed with high pitch, expanded pitch range, falling tones, loud volume, fast tempo and controlled enunciation (Juslin & Scherer, 2005; Pavlenko, 2007; Scherer, 2003). Consequently, findings on this typical emotion are consistent with previous research.

2- The phonetic realization of **[satisfaction: pleasure]** has strong prediction value for **high to mid pitch level** (as high: 53.8% and mid: 38.5% together account for 92.3% of the cases) and **unmarked syllable tempo** (92.3%), good prediction value for **wide pitch range** (69.2%), **moderate volume** (69.2%), **precise articulation** (69.2%), and **moderate to fast tempo** (as moderate: 53.8% and fast: 30.8% together account for 84.6% of the instances), and limited prediction value for **falling tones** (61.5%). Only one

⁶⁹ Phonetic profiles are boldfaced.

occurrence of paralinguistic features is present in the form of a **glottal attack**. Previous research has studied pleasure as an emotion label taking into account only findings from a few of the variables studied here: pitch level and direction, and tempo (Pavlenko, 2007). The findings proposed in the present work agree with those suggested in prior research.

3- The oral realization of **[unhappiness: misery]** shows strong prediction value for **low pitch height** (100% of the cases) and **narrow pitch range** (92.%), good prediction value for **falling tones** (84.6%) and **unmarked extension of syllable tempo** (84.6%), and limited prediction value to be uttered with **moderate volume** (61.5%), **precise articulation** (61.5%) and **moderate tempo in stretches** (53.8%). Some paralinguistic features are also observed. **Rough** voice quality was present in one case and two cases were marked with **glottal attacks**. Only one case of **breath-in** (vocal effect) was registered in the sample.

Most instances of [unhappiness: misery] were identified as portraying sadness (10 out of 13). This allows the comparison with one of "those emotions that have been more thoroughly studied" (Juslin & Scherer, 2005, p. 89). According to previous research sadness is characterized by low pitch level and narrow pitch range (Juslin & Scherer, 2005; Pavlenko, 2007; Scherer, 2003). Falling tones (simple falls and rise-falls) were the most frequent choice for the characterization of pitch direction to express sadness in the present study. Some instances of level tones were also observed. In prior work, the use of falling tones has been reported as a first option but some occurrences of rising or flat tones have been suggested too. Findings from the present study as regards these features are in complete agreement with prior work. However, tempo, precision and paralinguistic feature results are not consistent as most studies report slow tempo, slurred articulation and breathy voice. Differences in articulation could be explained with reference to the physical proximity with the audience. Fairy tales are typically read aloud to an audience with no shared immediate situation with the writer or storyteller. This fact establishes a distance between reader and listener which does not allow for clarifications in case the audience does not understand or hear properly. Therefore, precise articulation on the part of the reader is more likely to occur even when portraying sadness. Previous research has concentrated on conversational situations which are characterized (in the case of natural samples) or imitate (portrayed samples) a shared immediate situation. In this context

participants have access to body language and facial expression to help them decode the emotion produced as well as the necessary proximity to check and double check whether they have heard correctly. The difference in relation to tempo (moderate vs slow) can also be explained in similar terms. Intelligibility and thus the listeners' understanding of the message could be affected by too slow a speech delivery. As regards paralinguistic features, the examples observed in the present study are sporadic and therefore cannot be significantly compared with previous research.

4- The phonetic description of **[happiness: cheer]** renders the following tendencies. Three phonetic variables can be considered as having good prediction value: **unmarked extension of syllables** (70% of the instances), **falling tones** (70%), and **mid to high pitch height** (as mid: 40% and high: 40% together account for 80% of the cases). Loudness is interpreted as having a strong prediction value from **moderate** (55%) **to loud** (45%) as no cases of soft volume are identified. The rest of the phonetic profile presents percentages that render limited prediction value. **Narrow pitch range** is used in 60% of the sample. **Tempo** is mainly **moderate in stretches** (65%). **Precise articulation** occurs in 65% of the cases. As regards paralinguistic features [happiness: cheer] is accompanied by the inclusion of **creakiness** in two tone units. Nevertheless, a closer analysis of these instances suggests that this choice is mainly due to the storyteller's intention to imitate the voice of a male character rather than to depict an emotional state. Voice qualify is also marked by two cases of **glottal attacks**. No vocal effects or voice qualifications were observed.

Terms labelled as [happiness: cheer] were classified as expressing feelings of happiness or cheer following the typical emotion categories proposed by Bednarek (2008). Previous research reported by Pavlenko (2007) indicates a great resemblance between the oral realizations of "happiness, joy and cheerfulness" (p. 46). Other studies consulted label this emotion as "joy/elation" (Scherer, 2003, p.233) or "happiness/joy" (Juslin & Scherer, 2005, p. 90). The phonetic profile suggested in the present study is consistent with the findings reported by previous research for most variables.

The fact that the profile suggested for [happiness: cheer] has mainly a limited prediction value with varied results for most phonetic variables is in agreement with previous findings. Pavlenko (2007) also mentions the idea that happiness and joy have a varied and ambiguous realization which seems to partly explain the differences between the findings. Another possible explanation for the cases analysed in this particular study is presented next.

A detailed examination of the [happiness: cheer] cases led to some interesting observations which could explain the different phonetic values the storyteller selected to signal this emotion. Having the phonetic profiles suggested in the present study in mind, the vocal cues selected by the storyteller to voice some [happiness: cheer] instances occurring in the fairy tale "King Thrushbeard" were considered contradictory. The phonetic choices selected contradict the predicted oral realization of this AFFECT subtype as they are more associated to [unhappiness] than [happiness] in the phonetic taxonomy proposed. There seems to be a contradiction between the happiness expressed verbally by the emotion terms and the non-linguistic vocal cues chosen by the storyteller to signal the emotion.

The analysis of the context and co-text of these instances, however, helps to explain this unexpected oral realization. Whenever the king's daughter is the emoter or part of the trigger of affect, the storyteller seems to refuse to colour the utterance with clear oral indications of happiness. It is as if by not following the typical phonetic profile of the feeling in the oral rendering, the storyteller is showing her disapproval of the king's daughter's behaviour, who expresses joy mainly at the cost of others, when she mocks people. The storyteller may be said to represent and naturalize a cultural rejection to this kind of behaviour in her reading aloud.

The trigger that causes the girl's happiness (e.g. mocking other people) places the storyteller in a difficult situation as her voice can materialize different readings of the content of the text. The storyteller can choose to signal orally the emotions denoted in the written text using the expected phonetic choices for those emotions, or to signal the opposite emotion in her oral realization, thus creating a contradiction between the linguistic and non-linguistic expression of the emotion. Table 6.2 provides the analysis of the example "Look, she cried and laughed" extracted from "King Thrushbeard" which illustrates this interpretation.

extract	Pitch level	Pitch range	Pitch direction	Loudness	Tempo		Precision
		8-			stretches	syllables	
"Look,"	high	wide	rise-fall	loud	slow	drawled	precise
she cried	mid	narrow	fall	moderate	moderate	unmarked	unmarked
and laughed	low	narrow	fall	moderate	moderate	unmarked	unmarked

Table 6.2Example: "Look, she cried and laughed"

As can be seen from the values chosen for each phonetic variable there is a marked difference between the way the storyteller read aloud the king's daughter's actual word "Look" showing most typical phonetic features of happiness described in this study (all but tempo) and the other two words, emotion terms depicting [happiness: cheer]. The behavioural processes describing the girl's physical manifestation of happiness ('cried' and 'laughed') are read with phonetic features that show a contradiction between the attitudinal meanings construed by the words themselves [happiness: cheer] and the oral manifestation selected by the storyteller.

This example illustrates the enriching effects that the combination of linguistic resources interpreted by means of the APPRAISAL framework and non-linguistic phonetic features can have for the identification and description of attitudinal meanings. This combination of resources might be beneficial not only when teaching reading aloud strategies but also for the interpretation of attitudes in fairy tales. This pedagogical implication is explored in Chapter VII.

5- The oral realization of **[happiness: affection]** in the fairy tales studied is characterized by good prediction value with 80% of the cases showing **wide pitch range**, **soft volume**, **unmarked syllable tempo** and **precise articulation**, and limited prediction value with 60% of the cases realized with **mid pitch level**, **rises** and **fall-rises**, and **fast tempo**. Paralinguistic features occur only once as a vocal effect, **breath-in**. Even when the sample of the present research is small (5 cases for this emotion), findings are consistent with previous research (Juslin & Scherer, 2005; Pavlenko, 2007). 6- The phonetic features for **[insecurity: disquiet]** have good prediction value to be realized with **narrow pitch range** (76.5% of the cases), **falling tones** (81%), **soft volume** (76.2%), **unmarked extension of syllable tempo** (66.7%) and **precise articulation** (85.7%). **Pitch height** frequencies fall within limited prediction values: **low** (61.9%) as well as frequencies for **tempo in stretches: fast** (42.9%). Paralinguistic features are used to mark insecurity in 3 cases. Voice quality was observed in two cases, one **creak** and one **breathy** voice. Vocal effects were present with one **breath-in** instance and one **tremulous** example of voice qualification was registered.

Most terms classified as insecurity expressed the typical emotion of fear (18 out of 21 tone units). The phonetic profile suggested for [insecurity: disquiet - fear] in the present study does not agree with previous research and could even be described as opposite. Differences have been identified in pitch height, range, and direction, volume, tempo, precision of articulation and voice quality. These differences might be explained if the contexts of production are considered. The instances analysed in the present study are mainly the narrator's description of characters experiencing fear rather than characters orally reacting themselves to frightening situations as in the case of previous studies (Juslin & Scherer, 2005; Pavlenko, 2007; Scherer, 2003). Further research could explore these two sides of the same emotion.

7- The phonetic profile for [surprise] has strong prediction value with 100% of the cases realized with wide pitch range and precise articulation, and limited prediction value with 60% for high pitch level, falling tones, moderate volume, fast tempo and drawled syllable tempo. With regard to paralinguistic features, one instance of glottal attack was observed. The observations in the present study seem to coincide with those suggested by Juslin and Scherer (2005) and Pavlenko (2007).

To summarize, all the phonetic profiles have been classified according to whether they had strong, good or limited prediction value. No suprasegmental feature was assigned low prediction value. In general terms, the prediction value of the phonetic profiles was:

- mainly good as 47% of the features had good prediction value,
- limited for 35% of the cases and,

• strong for 18% of the suprasegmental features.

Considering this general prediction value, the initial taxonomy of phonetic profiles of INSCRIBED AFFECT could be said to offer a fairly reliable description of the oral realization of the emotions observed in the fairy tales studied.

The prediction value assigned to each suprasegmental feature studied is also varied. Even when all the suprasegmental features examined were assigned prediction values above 'low', the features could be organized in terms of strength of prediction from strongest to weakest as follows: 1- pitch range, 2- loudness, 3- pitch height, 4- extension of syllables, 5- precision of articulation, 6- pitch direction and, 7- tempo in stretches. Therefore, these findings suggest that the most relevant suprasegmental features to signal emotion orally are pitch range, loudness and pitch height.

Paralinguistic features are present in all the phonetic profiles developed. Glottal attacks appear as the most frequent feature selected by the storyteller (52% of the instances) followed by other voice qualities (creak, rough and breathy voice). Only two other paralinguistic features are present in the samples: breath-in (vocal effect) and tremulous voice. Further research could be carried out with a larger sample read by different speakers to test whether these findings are influenced by the speaker's preference of one paralinguistic feature over the rest.

On the whole, there seems to be a consistent and predictable relationship between semantic features realized verbally in the text and their oral (suprasegmental and paralinguistic) expression. This systematic association has been captured in an initial taxonomy of phonetic profiles of the INSCRIBED AFFECT observed in the fairy tales studied. These preliminary phonetic profiles have been described in detail and classified according to their prediction value to determine how expected each suprasegmental feature is for the production of the emotion studied. Findings also indicate that the combination of the written and oral analysis of the expression of AFFECT creates and confirms meanings that could probably never be achieved independently. Generalizations as regards the most relevant suprasegmental features have also been suggested. Moreover, the results obtained in the present study support previous research in most cases, and most dissimilarities can be explained in the light of methodological and corpus differences. VI.1.2.2 Association of INSCRIBED AFFECT valence and phonetic results

Phonetic results have also been associated with AFFECT valence as anticipated in Chapter V. The phonetic realization of two negative valence AFFECT subtypes – [dissatisfaction: displeasure] and [unhappiness: misery] – deploys stronger and clearer oral profiles than positive ones of the same AFFECT type – [satisfaction: pleasure] and [happiness: cheer]. Turner and Stets (2005) (as cited in Bednarek, 2008, p. 50) suggested that this tendency "has to do with the importance of negative cues" in registering situations which expect some kind of immediate reaction on the part of the listeners even when listening to a story.

A comparison between the phonetic realizations of these complementary AFFECT subtypes – [dissatisfaction: displeasure] versus [satisfaction: pleasure]; [unhappiness: misery] versus [happiness: cheer] – reinforces this idea. Figures 6.2 and 6.3 show a comparison of the percentages obtained for each value per variable of the complementary AFFECT subtypes.



Figure 6.1 - dis/satisfaction comparison of phonetic realization. All numbers represents percentages. The orange bar signals the point of 70%. Percentages below 40% are not written down.



Figure 6.2 - un/happiness comparison of phonetic realization. All numbers represents percentages. The orange bar signals the point of 70%. Percentages below 40% are not written down.

As can be seen, both figures are crossed by an orange bar that highlights the level of 70% which indicates a good prediction value for this study. Considering this criterion most variables reflect clearer tendencies for negative valence AFFECT. In the case of dis/satisfaction 6 out 7 variables show percentages above 70% for dissatisfaction and just one for satisfaction. All variables have percentages of 70% or higher in the case of unhappiness whereas only 2 variables show percentages of 70% for happiness. These examples confirm, at least for the present study, the finding that negative valence seems to deploy more and clearer strategies of realization both in the written and oral mode.

In brief, this first section in the discussion has presented clear evidence supporting the first hypothesis of this study:

There is a specific and stable relation – that can be captured in terms of tendencies – between INSCRIBED AFFECT in the fairy tales analysed and the suprasegmental and paralinguistic features selected by the expert storyteller to express those emotions orally.

The association between the written and oral expression of emotions has been systematized into an initial taxonomy of phonetic profiles for each of the AFFECT subtypes observed in the fairy tales studied. This association has valuable implications for the teaching and learning of emotions in EFL contexts which are explored in Chapter VII. A possible association between AFFECT valence and the clarity of the oral realization deployed has also been explored. The following section explores the findings as regards the gradability of feelings.

Section 2

VI.2. Research question 2: discussion of results

Section 2 discusses the results obtained related to the following research question:

What is the association between the written semantics of intensification of INSCRIBED AFFECT and the phonetic variables of pitch height, pitch range, loudness and tempo?

Tendencies show that there is, in fact, an association and linear correlation between the written semantics of intensification of INSCRIBED AFFECT and pitch height, pitch range, loudness and tempo.

VI.2.1 Written semantics of intensification - GRADUATION and its phonetic realization

The results obtained are first interpreted in terms of the modes and degrees of intensification proposed by Martin and White (2005). After this interpretation, the categories of analysis added to account for all the cases of intensification observed in the sample of fairy tales studied are described and explained (See Table 5.11). The focus of this discussion is initially the written verbal realization of intensification, and then, its phonetic realization in terms of pitch height, pitch range, loudness and tempo. The study of the relation between the written and oral realization of GRADUATION reveals strong tendencies of association and correlation.

VI.2.1.1 Written realization of modes of intensification

The present study explored the written realization of intensification of INSCRIBED AFFECT in three fairy tales. All GRADUATION instances observed up-scaled the semantic meanings encoded by the emotion terms so that no cases were down-graded⁷⁰. As explained in Chapter II, Section 1, Martin and White (2005) describe three modes of intensification: infused graders, isolating graders and repetition. In the samples examined infusion appeared to be the most frequent resource to amplify affective meanings, as 96% of the emotion terms were infused. Isolation followed in frequency with 23% of the emotion terms pre- or post-modified by a grammatical intensifier. And finally, repetition had the lowest incidence, 10% of occurrence.

The tendency for infusion to be the most frequent mode of intensification can be explained considering the linguistic resources for inscribing AFFECT. AFFECT can be lexicogrammatically realized by different word classes: nouns (e.g. joy, astonishment), adjectives (e.g. sad, afraid), verbs (e.g. rejoiced, weep), adverbs (e.g. bitterly) and interjections (e.g. alas, ha). Bednarek (2008) specifies that AFFECT is prototypically realized by adjectives, verbs, nouns and adverbs which denote emotions and "make up the resources for emotion talk in British English" (p. 17). Additionally, these attitudinal resources are described by Martin and White (2005) as "inherently gradable" (p. 37) and thus prone to be infused with intensification.

The three fairy tales analysed contained a great number of verbs and adjectives with infused GRADUATION. This could be explained considering the fact that verbs ('mental' and 'behavioural' processes) and adjectives ('qualities') are the congruent lexicogrammatical realizations of AFFECT and therefore attitudinal gradable resources. The present study has considered the behavioural manifestation of a state of mind as potentially gradable. The verb 'crying', for example, could be considered to be less intensified than 'weeping'. Behavioural processes have been, therefore, classified as infused.

⁷⁰ This up-scaling tendency could be further explored in future research.
Having these considerations in mind, it could be suggested that infusion is the most recurrent resource for intensification because it can be inherently realized in verbs and adjectives which are the congruent lexicogrammatical resources of AFFECT. The more congruent the resource, the easier it is for children to interpret even when amplified and thus probably the more frequent in fairy tales. Further research could be carried out to justify the reasons for this preference.

VI.2.1.2 Oral realization of modes of intensification

Although the tendencies described in the present study are based on a small sample, the findings establish a strong association for all written modes of intensification and the phonetic variables of pitch height, pitch range, loudness and tempo (see boldfaced tendencies in Chapter V, Tables 5.7, 5.8 and 5.9 for details). The written variable 'mode of intensification', therefore, does not appear to be significant as regards differences in how it influences the phonetic realization of GRADUATION for the texts examined. Moreover, the phonetic realization of intensification seems to be independent of the AFFECT type and subtype it is modifying. Table 6.1 summarizes the findings showing the association between the phonetic realization of AFFECT and the changes this realization suffers when INSCRIBED AFFECT is up-scaled.

Table 6.3

Phonetic variables	Phonetic profile of INSCRIBED AFFECT	Graduated AFFECT
Pitch height	high>	extra high
	$low \longrightarrow$	extra low
Pitch range	wide>	extra wide
	narrow>	extra narrow
Loudness	$loud \longrightarrow$	extra loud
	moderate>	varied results
	soft>	extra soft
Tempo	fast>	extra fast
	moderate>	same value

Phonetic realization of INSCRIBED AFFECT and up-scaled graduated AFFECT

Note: the arrows indicate the amplification of the profile phonetic value when it realizes up-scaled graduated AFFECT.

Table 6.1 shows how the written realization of GRADUATION is accompanied by a systematic use of amplified phonetic features. The phonetic values chosen as part of the profile of a certain AFFECT subtype (See Section VI.1.2.1) are intensified just as the semantic commitment expressed in the written form is amplified by means of infusion, isolation or repetition (resources used in the cases interpreted here). These findings suggest that the different modes of written – linguistic – intensification up-scale the phonetic realization of INSCRIBED AFFECT independently of the written expression strategy used to amplify semantic meanings.

VI.2.1.3 Written and oral realization of degrees of intensification

Outcomes related to the written and oral realization of degrees of intensification have been interpreted following Martin and White's (2005) cline of intensity. This interpretation also resulted in an inventory of the expression strategies displayed for GRADUATION observed in the present study. An association between these written verbal resources and their oral realization is established in this discussion as well.

VI.2.1.3.1 Interpretation of cases following Martin and White's (2005) cline of intensity

The realization of GRADUATION was first explored as regards the degrees of intensification as presented by Martin and White's (2005) cline of intensity. Three examples classified as [satisfaction: pleasure] were analysed not only in terms of their position in Martin and White's cline of intensity but also as regards their phonetic realizations (see Section V.2.3, Table 5.10).

Examples containing the emotion terms 'delighted' (e.g. "and delighted") and 'pleases/d' (e.g. "Your song has pleased me so well" and "That is an art which pleases me well") were placed differently in the cline of intensity. The degree of "loudness" of expressive meanings, in Poynton's words (1996, p. 215), is higher in 'delighted' than in

'pleases/d'⁷¹. Therefore, these words take different positions in the cline due to their inherently infused intensity. Their phonetic realization also depicts this difference as regards pitch height and range. The highly infused 'delighted' displays higher and wider values than the median intensified 'pleases/d'. These findings are in agreement with the ones previously reported by this study as regards modes of intensification displayed in Table 6.1. The values for volume show a closer approximation to the [satisfaction: pleasure] profile value (moderate) in the case of the highly intensified lexeme.

These examples analysed in detail suggest a possible correlation between the written and oral realization of degrees of intensity. It appears that the higher the written realization is in the intensity cline, the more amplified the phonetic features studied are. Nevertheless, further research with a larger sample should be carried out to test these preliminary findings.

VI.2.1.3.2 Inventory of the written expression strategies displayed for GRADUATION – intensification

As stated in Chapter V, *Results*, Martin and White's (2005) cline of intensity includes some but not all of the resources analysed in this study for the realization of GRADUATION. Exclaiming and fronting or the potential for combining resources are not explicitly mentioned. An inventory of the choices observed is displayed in Table 5.11 which is reproduced here for ease of reference.

Inventory of written verbal expression resources for GRADUATION – intensification in the sample

written verbal GRADUATION resources for intensification			
Single			Combined
denoting	infusing	congruent: e.g. adjectives (<i>angry</i>) ⁷²	e.g. "I shall be <i>very</i> glad to do

Table 5.11 (reproduced)

⁷¹ According to the Longman Exam Coach Dictionary, the verb "delight" means "to give someone great satisfaction and enjoyment", whereas the verb "please" means "to make someone happy or satisfied".
⁷² All examples were extracted from the stories studied.

	isolating	incon gram	gruent: e.g. nouns (<i>anger</i>) natical: e.g. adverbs (<i>very</i>)	it." (median-high intensity infused adjective up-scaled by grammatical isolation)		
		lexica	ll: e.g. adverbs (<i>bitterly</i>)	(median-high intensity		
signalling	repeating: "Th	ne devil told you t	that! The devil told you that!"	infused behavioural process verb up-scaled by lexical		
	showing: beha	vioural processes	s (shuddered)	isolation)		
	placing: foreg	m I)	e.g. "Then they <i>danced</i> and <i>skipped</i> and <i>leaped</i> over			
	exclaiming gramm		exclamative (How glad am I)	chairs and benches." (median- to high infused behavioural		
			interjection (Alas)	process verbs up-scaled by repetition)		
		orthographical ((The devil told you that!)	e.g. "Glad am I "		
				(median-high intensity infused adjective up-scaled by fronting)		

This inventory includes all the written verbal expression strategies deployed in the sample for this study. The most important feature of this group of resources is that it accounts for not only the use of individual resources for intensification – *single* strategies – but also for the strong tendency these resources have to appear in combination – *combined* strategies. Within the *single* realization a further distinction seems necessary as some lexicogrammatical resources are easily recognized as explicitly denoting GRADUATION (infusion and isolating) and thus assigned the category of *denoting intensification*. These lexicogrammatical instantiations have long been recognized as linguistic forms of amplification by several authors (Eggins & Slade, 1997; Macken-Horarik & Isaac, 2014; Martin & White, 2005; Poynton, 1996).

On the other hand, resources such as *showing* intensification, *placing* and *exclaiming* do not appear as part of existing system networks for GRADUATION. These resources seem to intensify semantic attitudes in a more implicit manner, *signalling* amplification rather than denoting it. *Signalling intensification*, therefore, includes those resources which in the same way as *repeating* (already present as repetition in Martin & White's 2005 description) are less obviously intensifying.

By *showing* intensification the inventory captures those polysemous behavioural processes describing physical manifestations of emotional states related to more than one emotion. Examples illustrating this are 'cry', 'weep' or 'shuddered'. *Placing* refers to

whether the emotion terms are *foregrounded* or *backgrounded*. The data analysed only includes examples of *foregrounded* adjectives such as "Glad am I" and "Ah, unhappy girl that I am" as a resource for intensification.

This finding is consistent with Poynton's idea that

the first realization of attitude as initial Epithet has particular significance (it is after all, the first lexical item of the structure), functioning rather like a key signature announcing the tonality of the music it precedes. An initial Epithet could be seen as announcing the relevant attitudinal 'key' whose scope is, initially, the whole nominal group, spreading it over the rest of the group (and ultimately the utterance), having the effect of foregrounding the attitudinally salient information and 'backgrounding' experiential content. (1996, p. 217)

Exclaiming is another amplifying resource available to speakers. It may be realized *grammatically* in the form of *exclamatives* and/or *orthographically* by the use of the exclamation mark regardless of the grammatical structure. Both types were identified in the data, e.g. "how glad the queen was" and "Alas!" The exclamative structure has been mentioned as a prosodic intensification resource by Martin and White (2005); this supports the idea that *exclaiming* may constitute part of the resources for GRADUATION.

In this way, all the resources observed in the data of the fairy tales studied have a specific place in the inventory suggested for GRADUATION. However, these resources do not always occur as independent intensifiers, many instances in the data presented a combination of two or more. The inventory captures this significant and very productive option for multiple GRADUATION devices to co-occur adding the *combined* choice and thus, including a concrete expression strategy that realizes the ongoing cumulative nature of APPRAISAL, GRADUATION in this case. The combination of resources will, of course, increase the semantic weight of the intensification expressed. This idea is in consonance with the prosodic realization of interpersonal meanings which "involves amplification; the volume is turned up so that the prosody makes a bigger splash reverberates through the surrounding discourse" (Martin & White, 2005, p. 20). As stated in Chapter V, these resources have been displayed as an inventory in Table 5.11 but were tested as resources potentially constituting a system network. A larger sample would be needed to confirm the options and the possible combinations.

This inventory, however, does not mention if or how these resources may realize different degrees of intensification. Is there a cline of intensity for the different resources of GRADUATION? If so, is it associated with speakers' phonetic realization of GRADUATION? The present study proposes a provisional answer based on a case analysis.

VI.2.1.3.3 Preliminary association between GRADUATION written expression strategies as a variable for degree of intensification and its phonetic realization

As stated in Chapter V, Section V.2.4.2 the repeated use of the emotion term 'glad' in the data constitutes a case worth examining in detail for the design of a cline of intensity which suggests an order for the different expression strategies described in Table 5.11. Studying a case with the same emotion term used as a single resource (the word 'glad' is a *single, denoting, infusing, congruent* resource) or in combination with other strategies ('glad' + 'very', for example) presents one clear advantage. It makes it possible to analyse and interpret the results focusing on one variable: the choice of expression strategy, as a defining factor influencing the degree of intensification.

The word 'glad' is used four times in the corpus of the fairy tales examined: "for the people were glad", "I shall be very glad", "how glad the queen was!" and "Glad am I". As already stated in Chapter V, the written verbal expression strategies used to amplify its attitudinal meaning can be described and ordered from lowest (1) to highest (4) degree of intensity as follows:

- median-high infused single, denoting, infusing, congruent resource as in "for the people were glad";
- combination of its infusion with *grammatical isolating* resource as in "I shall be very glad";
- median-high inherently intensified quality up-scaled by a signalling exclaiming resource: 'glad' is used in an exclamation marked in structure – grammatical exclamative form – and orthographically in "how glad the queen was!";
- 4. inherently intensified nature of the word 'glad' in combination with a *signalling* resource: *foregrounding placing* in the clause "Glad am I".

It seems reasonable to assume that the use of 'glad' as a single resource may have a lower degree of intensification than the use of 'glad' plus an isolating lexeme amplifying its semantic load, e.g. 'very glad'. This explains the order of examples 1 and 2.

The expression strategies exemplified in 3 (*exclaiming*) and 4 (*placing*), thematise the emotion term and thus place it in a marked, prominent position in the clause (using a special thematic structure). This thematic status, however, cannot be interpreted as having the same weight and degree of intensification force in both examples. Exclamative clauses typically select a nominal or adverbial group functioning as exclamative (Wh-) element (e.g. how glad) as their unmarked theme (Halliday & Matthiessen, 2014). *Foregrounding* involves assigning thematic status to an item that is usually placed as rheme as in "glad am I" where 'glad' is a marked theme versus "I am glad" which is the unmarked structure.

Considering these differences in the semantic weight of the intensification involved, the present study proposes to allot *foregrounding* the highest degree of intensity in the cline followed by *exclaiming*, *isolating* resources, and median-high *infusion*. Further descriptive work with more examples of all the categories suggested in Table 5.11 should be carried out to complete and test this tentative cline of intensity of written verbal expression strategies.

This preliminary hierarchy is strengthened by the phonetic realization of these clauses. As stated in Chapter V, the Pearson correlation test depicts a linear relationship between the degrees of written intensification for 'glad' [happiness: cheer] and each of the four phonetic variables measured: pitch height, pitch range, loudness and tempo. In the case of the first three variables the linear correlation is positive, meaning that the higher the degree of written intensification the higher the pitch height, the wider the pitch range and the louder the volume. Tempo exhibits a negative linear correlation which is interpreted as the higher the degree of written intensification the slower the tempo. Figure 6.3 illustrates the positive correlation between written intensification and pitch height and Figure 6.4 shows the negative correlation between written intensification and tempo.



Figure 6.3 - Positive correlation between written intensification and pitch height



Figure 6.4 - Negative correlation between written intensification and tempo

These findings reinforce the outcomes reported by this study in relation to the association of the written and oral realization of GRADUATION following Martin and White's (2005) classification (See Section VI.2.1). Pitch height, loudness and tempo follow the same tendencies identified: the phonetic intensification of pitch height, loudness and tempo is realized by extra high, extra loud and moderate as expected. The findings as regards pitch range, however, differ from previous tendencies as it is realized as extra wide

when it was expected to be extra narrow. These preliminary findings could be tested with a larger sample containing more and varied AFFECT cases in order to make sounder generalization.

In brief, the results discussed in this section confirm the second hypothesis of this thesis:

The use of written semantic resources to intensify INSCRIBED AFFECT results in an intensified use of the typical phonetic values of pitch height, pitch range, loudness and tempo for the type of AFFECT analysed in the oral production.

In addition, it is possible to put forward a supplementary hypothesis related to the existence of a correlation between written and oral degrees of intensity. Findings from the present study predict a confirmation to this hypothesis but a larger and more varied sample needs to be studied.

In conclusion, this chapter has established the existence of a stable relation between the written and oral expression of emotion as well as between the written semantics of intensification and its phonetic realization in the samples examined. Phonetic profiles for each AFFECT subtype have been suggested and compared with previous research. Moreover, preliminary indications that different degrees of intensification may be realized not only by means of written verbal expression strategies but also phonetically have been included.

Even when the sample examined is small, the value of this study lies on the fact that it provides an insight into the association and combination of resources for the expression of emotions drawing on a combined framework of APPRAISAL and an adaptation of Roach et al.'s (1998) phonetic taxonomy. The results seem to have provisionally pushed forward the analysis of Martin and White's rejection to the idea "that a line of arbitrariness needs to be drawn between content and expression form as far as interpersonal meaning is concerned" (2005, p. 12). It provides explicit evidence in favour of a relation between interpersonal semantics and lexicogrammatical content and its phonetic expression. These two realization modes of the semantics of affect are clearly doing their own independent job, both realizing the semantics involved. Additionally, they are associated to each other, complementing each other, affecting each other in a systematic and fairly predictable way, even within the relatively reduced context of this study. The theoretical implications of these findings seem to open up interesting future research questions.

Chapter VII, *Pedagogical Implications*, that follows, proposes significant pedagogical implications for the teaching and learning of the expression of emotions when reading aloud fairy tales at university level EFL teacher training programs arising from the interpretation of the findings reported by the present study.

CHAPTER VII

PEDAGOGICAL IMPLICATIONS

VII.1 Research question 3: pedagogical implications

This chapter suggests possible implications of the findings explained in Chapter VI, *Discussion*, in order to answer the third research question formulated:

What pedagogical implications can be derived from these findings for the teaching and learning of the expression of emotions when reading aloud fairy tales at university level EFL teacher training programs?

As stated in Chapter I, *Introduction*, this thesis originated in search of appropriate systematic means to help students overcome the challenge of expressing emotions effectively when reading aloud fairy tales at the University of La Pampa EFL teacher training program. Consequently, the implications put forward in this chapter deal first of all with the educational effects the findings might have to improve the teaching and learning strategies applied for reading aloud fairy tales. A collateral implication is also suggested for grammar courses dealing with the system of APPRAISAL.

Reading aloud a fairy tale entails voicing an interpretation of the attitudinal content of the written text. It could be said, therefore, that a first step towards an expressive reading aloud is efficient reading comprehension. The reading comprehension of texts and the interpretation of the interpersonal meanings construed in those texts in particular represent a challenge for most students. This task is usually tackled focusing on the written text as the main source of meanings: that is, little or no attention is paid to effective oral renderings by competent speakers when they are available as teaching resources. Many of the texts used at the University of La Pampa, for example, have a written version and an oral rendering by a competent speaker which is not necessarily listened to in class as part of the activities done to aid reading comprehension.

Oral samples are seldom used to provide additional cues for the interpretation of the written texts. In this way, written content – discourse semantics and lexicogrammar – is

considered to be the only source of information examined for the development of reading comprehension strategies in EFL contexts, disregarding oral expression – phonology and phonetics – as a source of meaning. It is not the intention of this thesis to question the status of written texts as self-explanatory but rather to call attention to how oral renderings by competent speakers may aid EFL students in the identification, description and interpretation of a text's interpersonal attitudinal meanings and thus of its "dominant reading" (Rothery & Stenglin, 2000, p. 256). EFL students' oral production of emotion when reading aloud fairy tales might improve if students feel more confident when interpreting the attitudinal meanings of the written text. An explicit understanding of the resources at play in the oral rendering of a text should help this happen.

Findings from the present work establish and describe the association between the written and oral expression of emotion in the fairy tales selected. Therefore, EFL teachers looking for pedagogical tools to help students develop reading aloud strategies could benefit from the multimodal approach that originates from the association studied in this thesis. This multimodal teaching method implies the combination of the APPRAISAL framework as a linguistic tool to understand the evaluative meanings at stake in the text and the taxonomy of phonetic profiles of the AFFECT subtypes observed in the fairy tales analysed⁷³. These profiles offer an initial systematic description of the suprasegmental and paralinguistic features that might be expected for the production of certain emotions. Gathering and joining information coming from the content and expression planes might be a path for a more successful interpretation of emotion in stories. This rich interpretation of the written text accompanied by the systematic description of the oral realization of most AFFECT subtypes provided in the phonetic profiles suggested in this thesis should result in more effective oral renderings of the fairy tales.

A possible implementation of the ideas suggested up to now could be the following:

⁷³ Even though the phonetic profiles describe only some AFFECT types and subtypes, they constitute a solid starting point for students dealing with *emotional speech*. Future research could complete the taxonomy of phonetic profiles with the remaining AFFECT types and subtypes.

- 1- Familiarizing students with the basic system of AFFECT as a linguistic tool to uncover attitudinal meanings considering also the co-text and context as a first step in the reading aloud activities.
- 2- Combining the analysis of the written linguistic expression of emotions with a phonetic analysis of a competent speaker's oral rendering using the suprasegmental and paralinguistic phonetic framework proposed in this thesis (See Chapter II, Section 2) for a better understanding of the interpersonal attitudinal meanings construed in the text.
- 3- Encouraging students to voice the attitudes and emotions construed in the written text making effective use of the suprasegmental and paralinguistic features described in the phonetic profiles proposed by this thesis.

The present study has also studied the intensification of INSCRIBED AFFECT. Findings on this respect suggest the existence of a strong association between the written verbal resources speakers use to intensify emotions and their phonetic expression. EFL students' awareness of this correlation might be useful when interpreting the emotional load of written texts. Thus, two additional steps could be added to those mentioned above:

- 4- Analysing written texts drawing on the basic system of GRADUATION and the inventory of resources suggested for single and combined expression strategies for intensification (See Table 5.11). Students could notice how upscaled attitudes splash through texts with a cumulative effect by means of different expression strategies.
- 5- Describing the systematic association between the written semantic resources to intensify INSCRIBED AFFECT and the intensified use of the typical phonetic values of pitch height, pitch range, loudness and tempo.

The oral realization of the different modes and degrees of intensification can be brought to light by means of systematic descriptions drawing on the findings proposed in this study. These findings suggest a linear correlation between the written and oral expression of intensification which could be used to show students how speakers may choose to reinforce meanings realized linguistically by means of non-linguistic or paralinguistic resources.

In brief, the reading aloud of fairy tales by EFL students might benefit from a multimodal approach focusing not only on "some correspondences between particular vocal cues, or rather bundles of cues, and affective meanings" but also on the need to "assess them in conjunction with lexical content ... and, most importantly, context" (Pavlenko, 2007, p. 54). The 5 steps suggested in this chapter might constitute initial and concrete steps to implement this multimodal approach.

Apart from the pedagogical implications related to the teaching of the expression of emotions when reading aloud fairy tales, some further implications might be proposed for grammar courses. The analysis and classification of some emotion terms in the present study highlight the difficulty implied in labelling attitudinal meanings even when co-text and context are analysed in detail. This challenge, in turn, is coupled by the importance of adding the phonetic expression as a tool for the understanding and interpretation of AFFECT and GRADUATION in texts. As discussed in Sections V.1.1.1.1 and VI.1.2.1 with regards to the word 'unhappy', the analysis of the phonetic realization of this term provides more cues, apart from the ones provided by the co-text and context of occurrence, which helped the researcher decide on AFFECT subtypes to label different instances. In addition, the phonetic analysis of the example "Look, she cried and laughed", classified as [happiness: cheer], (see Section VI.1.2.1) illustrates the opportunity this type of phonetic description gives researchers, teachers and students, to combine the written resources and the phonetic non-linguistic sources of information.

This suggestion is not intended to mean that the grammar class becomes a phonetic class, but rather that it takes advantage of EFL teacher training students' knowledge of phonetics. A multimodal approach which includes oral renderings when available might give students more analytical tools to decide on the types of AFFECT construed in texts, especially in texts in which the identification of types of AFFECT can be less straightforward.

As regards the teaching of GRADUATION in grammar classes, the findings of the present study offer an inventory of varied expression strategies observed in the fairy tales studied. The implication that speakers may choose from a wide variety of written verbal resources to intensify ATTITUDE and also may decide to combine those resources to increase

the amplifying effect of GRADUATION could also be explicitly discussed with students. In addition to this, the descriptive analysis of the phonetic realization of the word 'glad', (see Sections V.2.3.2 and VI.2.1.3.3) provides evidence as to a preliminary correlation between the written verbal expression strategies of intensification and their oral realization. Therefore, once the written realization of intensification has been dealt with, the coupling of written resources with suprasegmental features can be added to the discussion.

The curriculum of the EFL teaching program at the University of La Pampa, for example, includes the basic systems of APPRAISAL as a content area of a grammar class. The implications stated above in terms of AFFECT and GRADUATION derived from the findings of the present study could be considered in those classes to complement the written analysis of texts with its oral realization. The stable association described and discussed in the present study highlights the benefits that could be derived from analysing the written verbal realization and the oral expression of attitudinal meanings in a complementary way.

In general terms, the pedagogical importance of a multimodal approach is established by the descriptive-theoretical findings suggested by this study. These findings, in turn, coincide with Martin and White's (2005) view that no arbitrary line can be "drawn between content and expression form as far as interpersonal meaning is concerned" (p. 12).

In brief, this chapter contains a number of pedagogical implications which confirm the third hypothesis of this thesis:

The findings should render pedagogical implications to be considered for the teaching and learning of the expression of emotions when reading aloud fairy tales at university level EFL teacher training programs.

The findings resulting from this study might enhance the teaching practice in EFL contexts. Students might benefit from the application of these ideas not only as regards their reading aloud performances but also in terms of their reading comprehension strategies. Moreover, implications related to the teaching of the APPRAISAL framework might add on to pedagogical tools used in grammar courses.

The following chapter presents the most relevant conclusions derived from this thesis and describes the limitations of the present work as well as some ideas for future research.

CHAPTER VIII

CONCLUSIONS AND SUGGESTIONS FOR FURTHER RESEARCH

This study has explored the association between the written and oral expression of emotions in fairy tales. It has analysed and described the written expression of the semantics of emotion drawing on the system of APPRAISAL, particularly on the subsystems of AFFECT and GRADUATION, and the oral and non-linguistic expression following an adaptation of Roach et al.'s (1998) phonetic taxonomy. It has studied this association with a specific context in mind: reading aloud fairy tales at the University of La Pampa EFL teacher training program. The most relevant conclusions in terms of descriptive and theoretical findings, pedagogical implications, limitations and future research are mentioned next.

An initial taxonomy of phonetic profiles of INSCRIBED AFFECT was defined on the basis of the results obtained. This provisional taxonomy is an attempt to combine the linguistic categories of analysis of the APPRAISAL system with the non-linguistic phonetic framework adapted from Roach et al.'s (1998) to study the expression of emotions in fairy tales. However valuable this contribution might be, the generalizability of the phonetic profiles proposed for emotion terms is limited to the material analysed since they are based on the oral rendering of one storyteller. Pedagogical implications supporting the implementation of multimodal approaches for the teaching and learning of expression of emotion when reading aloud fairy tales have been suggested. Additionally, some implications have been proposed for grammar courses dealing with APPRAISAL. Further research could be carried out with a larger corpus of fairy tales read by different speakers in order to consolidate the findings.

It is possible to identify several paths for future work in the area of *emotional speech*. Further research could examine whether the tendencies suggested for INSCRIBED AFFECT hold for INVOKED AFFECT in fairy tales, for example. This area of future research might be of great importance as a considerable amount of emotion is actually only expressed implicitly in texts. Furthermore, research could be undertaken to explore possible

differences between how readers aloud realize affect orally when they are reading the narrator's description of character's feelings and when they are reading the characters' actual words as direct quotations.

Moreover, the classification of the written expression strategies of GRADUATION resulted in a possible contribution to this system within SFL (See Table 5.11, *Results*). The inventory suggested captures the significant and very productive possibility speakers have to combine resources for the intensification of emotions. It also identifies and describes new resources for GRADUATION: *placing* and *exclaiming*; and it proposes a classification of speakers' strategies to express intensification in a more or less explicit way: *denoting* and *signalling* resources. It is difficult to make definite claims about the applicability of these generalizations in a system network as the sample studied contained a small number of cases coming from one specific genre. Future research could be carried out on this very interesting line of enquiry to develop a system network.

In addition to this, this study proposes that there are preliminary indications that different degrees of intensification may be realized both by means of written expression strategies as well as by phonetic resources. A linear correlation between the written and oral degrees of intensification has also been postulated. These findings suggest theoretical implications which open up new areas of research.

The pedagogical implications of the findings as regards the potential benefits of employing a multimodal teaching approach combining written and oral resources for the interpretation and production of emotions when reading aloud have been described in Chapter VII. In this respect, Ariztimuño and Germani's (2014) study indicates that students read more expressively after being exposed to an introduction to the APPRAISAL framework. It would be of great value to test whether the application of a pedagogical tool designed combining APPRAISAL for the interpretation of the written expression of emotions in fairy tales and the initial taxonomy of phonetic profile for emotions suggested in this study would have a positive impact on students' oral renderings.

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Appendix A – Hugh Fraser's authorization

Hugh Fraser (hugh@storynory.com)

7/17/2013

To: larizti@hotmail.com

Dear Lilián Ariztimuño

Sorry for not getting back to you sooner. Yes, we are very happy for you to use our stories in your academic project (for free). Please acknowledge Storynory.com somewhere in the project as the owners of the materials saying that they are used by our permission.

Thank you

Hugh

Appendix C – Rating scale for selection of fairy tales (example⁷⁴)

The following questions and rating scale have been prepared as part of a thesis paper on reading aloud fairy tales. It is intended to grade six stories provided to you in their oral and written forms paying special attention to how effective, expressive and engaging the oral rendering is. Thanks in advance for your help.

Please, listen to story 1: <u>The Tale of Androcles and the Lion</u> and then answer the questions by selecting the most appropriate option.

Listen to the story once and answer questions 1 and 2 without referring to the written version of the fairy tales.

1. How would you evaluate the reader's aloud overall performance?

Unsatisfactory	Could be improved	Effective	Very effective
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2. How would you evaluate the reader's aloud rendering of emotions?

Unsatisfactory	Could be improved	Expressive	Very Expressive
e e	1	1	v 1

Listen to the story once more, this time look at the paper copy of the story and answer question 3.

- **3.** Considering the use of the following features: pitch height and range, loudness, tempo and pauses, how engaging would you say the oral performance is? Try to pay special attention to the sections that have been highlighted.
- PoorCould be improvedEngagingVery engaging

⁷⁴ The complete rating scale is included in the CD for supplementary material as part of the folder containing Appendix B.

Sample	INSCRIBED	Excerpt	Emoter	Trigger	GRADUATION FORCE
number	& typical emotion				- Intensification
1	happiness: cheer cheer	"She made herself especially merry over a good king."	the king's daughter	King Thrushbeard	merry: infusion: up- scaling <i>especially</i> merry : isolation: up-scaling
2	happiness: cheer cheer	"Look," she cried and laughed ."	the king's daughter	King Thrushbeard	laughed : infusion: up-scaling
3	happiness: cheer happiness	"for the people were glad "	The people	Buying from the king's daughter as she was good- looking	glad: infusion: up- scaling
4	happiness: cheer cheer	"and the joy began <i>in</i> <i>earnest</i> "	Everyone at the party	The marriage	joy: infusion: up- scaling <i>in earnest:</i> isolation: up-scaling
5	happiness: cheer happiness	"I shall be <i>very</i> glad to do it."	The shoemaker	Making shoes for the elves	glad: infusion: up- scaling <i>very</i> glad: isolation: up-scaling
6	happiness: cheer cheer	"Then they <i>danced</i> and <i>skipped</i> and <i>leaped</i> over chairs and benches."	The elves	No longer being cobblers	<i>danced skipped</i> <i>leaped:</i> infusion + repetition: up-scaling
7	happiness: cheer cheer	At last they <i>danced</i> out of the doors."	The elves	No longer being cobblers	<i>danced:</i> infusion + repetition: up-scaling
8	happiness: cheer happiness	"The king rejoiced <i>beyond measure</i> at the sight,"	The king (rum)	gold	rejoiced : infusion: up-scaling rejoiced <i>beyond</i> <i>measure</i> : isolation: up-scaling
9	happiness: cheer happiness	"Ha!" Glad am I"	Rumpelstiltskin	His secret name	glad: infusion: up- scaling
10	happiness: cheer happiness	"how glad the queen was"	The queen	Learning the name	glad: infusion: up- scaling
11	unhappiness: misery sadness	" Ah , unhappy girl that I am,"	The king's daughter	Seeing what she missed	unhappy : infusion: up-scaling
12	unhappiness: misery sadness	"she thought of her lot with a sad heart,"	The king's daughter	Herself	sad : infusion: up- scaling
13	unhappiness: misery sadness	"Then she wept <i>bitterly</i> "	The king's daughter	The evil days	wept: infusion: up- scaling bitterly: infusion: up- scaling

Appendix D - INSCRIBED AFFECT type and GRADUATION data collection

					wept <i>bitterly</i> :
14	unhappiness: misery sadness	"Alas,"	The king's daughter	Public embarrassme nt	alas: infusion: up- scaling
15	unhappiness: misery sadness	"she grew <i>more</i> and more miserable,"	The miller's daughter	Not knowing how to spin straw into gold	miserable : infusion: up-scaling <i>more and more</i> miserable : isolation: up-scaling; and, repetition
16	unhappiness: misery sadness	"she began to weep."	The miller's daughter	Feeling miserable	weep: infusion: up- scaling
17	unhappiness: misery disappointment	"She ran home and told him of the misfortune ."	The king's daughter (kth)	Broken pots	misfortune : infusion: up-scaling
18	happiness: affection pity	"why are you crying so?"	Rumpelstiltskin	The miller's daughter	crying: infusion: up- scaling
19	happiness: affection pity	"so that the manikin pitied her."	Rumpelstiltskin	The miller's daughter	pitied : infusion: up- scaling
20	happiness: affection like	"The woman liked the idea,"	The shoemaker's wife	The idea	no intensification
21	happiness: affection love	"For love of you,"	King Thrushbeard	The king's daughter	love : infusion: up- scaling
22	satisfaction: pleasure pleasure	"Your song has pleased me so well"	The king (kth)	The fiddler's song	pleased : infusion: up- scaling pleased so well: isolating: up-scaling
23	satisfaction: pleasure pleasure	"It does not please me "	The fiddler	The king's daughter's comments	please : infusion: up- scaling
24	satisfaction: pleasure pleasure	"and as the shoes pleased him <i>so</i> <i>very well</i> ,"	The shoemaker	The shoes	<pre>pleased: infusion: up- scaling pleased so very well: isolating: up - scaling</pre>
25	satisfaction: pleasure gratitude	"and we really must show that we are grateful for it."	The shoemaker	The elves	gratefu l: infusion: up-scaling
26	satisfaction: pleasure pleasure	"- and then delighted."	The elves	Shoes and clothes	delighted : infusion: up-scaling
27	satisfaction: pleasure pleasure	"That is an art which pleases me <i>well</i> ;"	The king (rum)	The miller's daughter's art	pleases: infusion: up- scaling pleases well : isolating: up-scaling
28	satisfaction: pleasure pleasure	"and delighted, "	The king (rum)	gold	delighted : infusion: up-scaling

29	dissatisfaction: displeasure anger	"was <i>very</i> angry,"	The king (kth)	His daughter's behaviour	angry: infusion: up- scaling <i>very</i> angry: isolation: up-scaling
30	dissatisfaction: displeasure anger ⁷⁵	"Ah, unhappy girl that I am,"	The king's daughter (kth)	Seeing what she missed	unhappy : infusion: up-scaling
31	dissatisfaction: displeasure anger	"Ah, unhappy girl that I am,"	The king's daughter (kth)	Seeing what she missed	unhappy : infusion: up-scaling clause 30 repeats the exact words and AFFECT type of clause 31: repetition: up- scaling
32	dissatisfaction: displeasure anger	"The devil told you that!	Rumpelstiltskin	The queen knowing his name	clauses 32, 33 and 34 appear together. The choice of words, the
33	dissatisfaction: displeasure anger	The devil told you that!"	Rumpelstiltskin	The queen knowing his name	co-text, the queen's discovery of Rumpelstilskin's
34	dissatisfaction: displeasure anger	Cried the little man,	Rumpelstiltskin	The queen knowing his name	name and clauses 35 & 36 that come after provide clear grounds for their labelling of in terms of AFFECT and intensification. Repetition: up-scaling cried: infusion: up- scaling
35	dissatisfaction: displeasure anger	"and in his anger he plunged his right foot so deep into the earth"	Rumpelstiltskin	The queen knowing his name	anger: infusion: up- scaling
36	dissatisfaction: displeasure anger	"and then in rage he pulled at his left leg so hard with both hands"	Rumpelstiltskin	The queen knowing his name	rage: infusion: up- scaling <i>anger rage:</i> clause 36 repeats the idea and lexicogrammatical structure of clause 35 and this intensifies affect by means of repetition
37	security: quiet assurance	"be comforted "	The king's daughter (kth)	The evil days are passed	no intensification
38	insecurity: disquiet fear	"The king's daughter shuddered ,"	The king's daughter (kth)	Marrying the fiddler	shuddered: infusion: up-scaling
39	insecurity: disquiet	"and shrank with fear ,"	The king's daughter (kth)	Seeing king Thrushbeard	fear : infusion: up- scaling

⁷⁵ See Chapter V, Section 1.1.2 for an explanation on the different labels for the emotion term 'unhappy'.

	fear				
40	insecurity: disquiet embarrassment	"she was <i>so</i> ashamed"	The king's daughter (kth)	Dropping soup and scraps	ashamed : infusion: up-scaling <i>so</i> ashamed : isolation: up-scaling
41	insecurity: disquiet fear	"Do not be afraid ,"	King Thrushbeard	The king's daughter (kth)	afraid: infusion: up- scaling
42	insecurity: disquiet fear	"She began to weep,"	The king's daughter (kth)	Broken pots	weep: infusion: up- scaling
43	insecurity: disquiet fear	"and did now know what to do for fear ."	The king's daughter (kth)	Broken pots	fear : infusion: up- scaling
44	insecurity: disquiet fear	"Alas, what will happen to me?"	The king's daughter (kth)	Broken pots	alas: infusion: up- scaling
45	insecurity: disquiet fear	Cried she	The king's daughter (kth)	Broken pots	cried: infusion: up- scaling
46	insecurity: disquiet fear	"Alas!" answered the girl,	The miller's daughter	The king's threat	alas: infusion: up- scaling
47	insecurity: disquiet fear	"and was crying"	The miller's daughter	The king's threat	crying: infusion: up- scaling
48	insecurity: disquiet fear	"The queen was horror struck"	The queen/ miller's daughter	The manikin's demand	horror struck : infusion: up-scaling
49	insecurity: disquiet fear	"Then the queen began to weep and cry ,"	The queen/ miller's daughter	The manikin's demand	weep: infusion: up- scaling <i>weep and cry</i> : repetition of related terms: up-scaling
50	insecurity: disquiet confusion	"they were at first puzzled "	The elves	Seeing the clothes and shoes	puzzled: infusion: up-scaling
51	surprise surprise	"he was astounded"	The shoemaker	The pair of shoes	astounded: infusion: up-scaling
52	surprise surprise	"the shoemaker could not turn away his eyes for astonishment ."	The shoemaker	Seeing the elves work	astonishment: infusion: up-scaling
53	surprise surprise inclination:	"he was astonished" "and wished her	The king (rum) Her father and	The gold Her	astonished: infusion: up-scaling no intensification
54	desire wishes	happiness in her marriage with the king."	his court	happiness	
55	inclination: desire wishes	"he was about to set to work with fresh hope for the future"	The shoemaker	What had happened the night before	no intensification

Infused inscribed AFFECT type	Tendencies	Pitch height in Hz	Pitch range in Hz	Loudness in dB	Tempo stretches in syllables per second
dissatisfaction:	Perceptual:	high	wide	loud	fast
displeasure: anger	Numerical	352	146	kth: 71,	3 syllables
(4 cases)	mean:			rum: 74,	per second
				elsh: no cases	
"Ah, unhappy girl		390	177	67	4
that I am," (kth)		higher	wider	softer	faster
"Ah, unhappy girl		453	251	74	4
that I am," (kth)		higher	wider	louder	faster
"Cried the little		324	151	77	4
man," (rum)		lower	wider	louder	faster
"and in his anger he		379	210	76	4
plunged his right foot		higher	wider	louder	faster
so deep into the					
earth" (rum)			4000/ 11		1000/
	Infusion	75% higher	100% wider	75% louder	100%
· · · · · · · · · · · · · · · · · · ·	intensification:	25% lower		25% softer	faster
insecurity: disquiet:	Perceptual:	low	narrow	SOIT	rast
(10 cases)	Numerical	254	78	kth: 65,	4 syllables
(10 eases)	mean:			rum: 68,	per second
				elsh: no cases	
"The king's daughter		211	54	64	5
shuddered," (kth)		lower	narrower	softer	faster
"and shrank with		216	50	64	4
fear," (kth)		lower	narrower	softer	same
"Do not be afraid ,"		164	39	61	5
(kth)		lower	narrower	softer	faster
"She began to		197	30	62	5
weep," (kth)		lower	narrower	softer	faster
"and did now know		228	59	63	4
what to do for fear ."		lower	narrower	softer	same
"Alas, what will		236	55	64	5
happen to me?" (kth)		lower	narrower	softer	faster
"Cried she" (kth)		214	46	65	3
		lower	narrower	softer	slower
"The queen was		212	67	67	4
horror struck" (rum)		lower	narrower	softer	same
"Then the queen		237	39	67	3
began to weep" (rum)		lower	narrower	softer	slower
"and cry," (rum)		217	82	66	2
		lower	wider	softer	slower
	Infusion	100% lower	90% narrower	100% softer	40% faster,
	intensification:		10% wider		30% same,
antinfanting	Danaa	1.1.1.			50% slower.
satisfaction:	Perceptual:	nıgn	wide	moderate	moderate

Appendix H - GRADUATION phonetic analysis

pleasure: pleasure	Numerical	282	128	kth: 66,	4 syllables
(4 cases)	mean:			rum: 70,	per second
				elsh: 64	
"Your song has		311	128	68	4
pleased me so		higher	same	louder	same
<i>well</i> " (kth)					
"It does not please		317	165	64	4
me ", (kth)		higher	wider	softer	same
"That is an art which		290	189	70	4
pleases me well;"		higher	wider	same	same
(rum)		200	229	(0	2
(mum)		300	238	69	3
(rum)	T.C. '	higher	wider	softer	slower
	Infusion	100% higher	75% wider	50% softer	75% same
	intensification:		25% same	25% same	25% slower
				25% louder	
unhappiness: misery:	Perceptual:	low	narrow	moderate	moderate
sadness	Numerical	227	53	kth: 68,	4 syllables
(5 cases)	mean:			rum: 71,	per second
				elsh: no cases	
"Ah, unhappy girl		274	89	69	4
that I am," (kth)		higher	wider	louder	same
"she thought of her		202	40	66	4
lot with a sad heart,"		lower	narrower	softer	same
(kth)					
"Alog " (1.1)		-			
Alas, (kth)		195	18	63	3
Alas, (ktn)		195 lower	18 narrower	63 softer	3 slower
"she grew <i>more</i>		195 lower 219	18 narrower 79	63 softer 75	3 slower 4
"she grew more and more		195 lower 219 lower	18 narrower 79 wider	63 softer 75 louder	3 slower 4 same
"she grew <i>more</i> and more miserable," (rum)		195 lower 219 lower	18 narrower 79 wider	63 softer 75 louder	3 slower 4 same
Alas, (ktn) "she grew <i>more</i> <i>and more</i> miserable ," (rum) "she began to		195 lower 219 lower 227	18 narrower 79 wider 48	63 softer 75 louder 68	3 slower 4 same 4
Alas, (ktn) "she grew more and more miserable," (rum) "she began to weep." (rum)		195 lower 219 lower 227 same	18 narrower 79 wider 48 narrower	63 softer 75 louder 68 softer	3 slower 4 same 4 same
Alas, (ktn) "she grew more and more miserable," (rum) "she began to weep." (rum)	Infusion	195 lower 219 lower 227 same 60% lower	18 narrower 79 wider 48 narrower 60% narrower	63 softer 75 louder 68 softer 60% softer	3 slower 4 same 4 same 80% same
Alas, (ktn) "she grew more and more miserable," (rum) "she began to weep." (rum)	Infusion intensification:	195 lower 219 lower 227 same 60% lower 20% same	18 narrower 79 wider 48 narrower 60% narrower 40% wider	63 softer 75 louder 68 softer 60% softer 40% louder	3 slower 4 same 4 same 80% same 20% slower

Note. syl= syllables, kth = King Thrusbeard, rum = Rumpelstiltskin, elsh = The elves and the shoemaker. Main tendencies are **boldfaced**.