

Introduction: The question

This book started as an attempt at empirical explanation of the conflicting evidence on irony processing. It ended up as an exploratory study testing the role of attitude in irony processing. It sounds like a switch of research topic, but it is not. In studying irony processing patterns, I found that I am actually exploring attitude effects. Hence, I modified my research question from how irony is processed, to what is the role of attitude in irony processing. This change of focus from irony to attitude in irony, allowed me to test irony from a wider perspective, and provided new insights on attitude effects in communicative meaning inferencing. Affective attitude turned out to be the big issue, and verbal irony – a communicative strategy of manifesting implicit attitudes in interactions.

The goal of the book is to investigate empirically the role of attitude in the process of irony comprehension. In a wider perspective, it seeks to probe the language/attitude interface in verbal communication. The questions that have inspired the current research include the following: (1) What communicative cues serve to express attitude? (2) What inferential processes (psychological, physiological) underpin and guide irony comprehension, and its spontaneous inferencing? (3) How do attitude and language interact in verbal message comprehension? (4) Do attitudinal, verbally expressed effects influence language processing patterns? (5) How? These questions necessitate an interdisciplinary approach that will inclusively cover for the numerous attitude-and-language interactions. The explorations undertaken in the book are set in linguistic pragmatics, and especially in its new empirical outshoot – experimental pragmatics, as well as in the neighboring disciplines, dedicated to the study of attitude in their own research paradigms (psychology, experimental social psychology, neuropsychology).

The idea of writing this monograph emerged from the interest in irony. Why study irony? For one, irony is a communicative strategy that holds many puzzles that pragmaticists strive to explain. For instance: (1) How the linguistic meaning becomes the contextualized meaning, (2) How the

contextualized meaning gets comprehended as the intended one, (3) How to bridge the gap between what people say (linguistic meaning) and what they mean (pragmatic meaning). In this sense irony exemplifies the essence of pragmatic research endeavors. To get to know what it takes to communicate and comprehend implicit meanings, such as irony, and to explain what inferential infrastructure it requires, and how the explicit and implicit meaning interweave into a communicative commodity, is a big, if not the ultimate goal of linguistic research in pragmatics. Pragmatics in its most basic, defining scope strives to explore and explain how language users, in social verbal interactions come to share the elusive communicative commodity – ‘meaning’. Attitudinal meaning – the meaning conveying positive or negative emotional contents, is but a part of it. Finding answers to such questions as: How the meaning systems – verbal/non-verbal, explicit/implicit, propositional/non-propositional relate to each other, and conspire to generate communicative meaning, is conducive to explaining how we grasp such implicit imports as irony in verbal communication. These questions make the bigger picture the present contribution seeks to explore. Since pragmatics holds an inclusive approach to communication and ventures to account for the entirety of communicative effects employed for verbal interactions, it needs to index, and explore the repertoire of strong and weak, explicit and implicit, propositional and non-propositional contextual cues, as employed for various communicative goals. Additionally, it aims to explain how these various effects conspire to produce contextualized meaning, and how the contextualized meaning gets inferred. Pragmatics so far has been busy accounting for the linguistic fabrics of meaning: How words signify in context. It still needs to account for the affective texture of meaning: How words, sentences and utterances convey their affective significance. Affect is a constant factor in communication. It may be expressed through a wide range of affective cues manifested by (1) verbal cues: (i) explicitly communicated, syntactic emphatic structures, prosodic contours manifesting affective contents, paralinguistic cues; (ii) implicitly communicated affective significance; (2) non-verbal cues: Tone, intonation, facial expression, gestures. How the affective effects couple with the linguistic effects to give rise to attitudinal meaning, and how the attitudinal significance colors irony comprehension – are the questions that make the contents of the present book, and are crucially relevant for experimental pragmatics.

A lot has been written about irony and its many communicative functions. Numerous attempts have been undertaken to explain how irony works, and why it is so frequently used in communicative interactions, as well as why we understand its implicit import so rapidly, and enjoy its charm more than that of its 'literal equivalents'. Numerous theories within the domains of sociology, psychology and linguistics have explored irony, and proposed various mechanisms to explain different ironic effects. Many of these attempts were successful in elucidating distinct aspects of irony. Yet, a lot still remains to be discovered. We still do not know, for instance, how irony is processed. What psychological (mental) and physiological (neural) mechanisms underpin its comprehension. Irony processing research has been providing conflicting evidence on irony processing patterns. One line of irony processing research has consistently been showing that the time of irony processing is longer than that of its literal equivalents' (e.g. Giora et al. 1998; Giora and Fein 1999). Another line of investigation has demonstrated that irony is processed as fast as the literal equivalents, or faster (e.g. Gibbs 1986b; Ivanko and Pexman 2003). This contradictory evidence was the inspiration to take a fresh look at irony, and test it experimentally in a novel perspective – as an implicit attitude, hoping that this new approach will allow to account for the conflicting irony processing results.

My idea was to probe into the attitude component of irony, and test how the attitudinal import constrains irony on-line processing. Numerous irony theories emphasize the importance of irony-attitude interface (e.g. Barbe 1995; Clark and Gerrig 1984; Kothoff 2003; Kreuz and Glucksberg 1989; Kumon-Nakamura et al. 1995; Muecke 1969; Partington 2007; Sperber and Wilson 1981, 1986, 1992, 1995). Barbe (1995:109) even noted that "irony is not a genre, but an attitude". In irony on top of what one literally says, one implicitly conveys an attitude towards what one says. To get the ironic sense, one needs to disambiguate the incongruity between the said and the meant. In this sense, attitude seems to be the key to get irony. Yet, the role of attitude in irony processing has not been so far explicitly tested. Therefore, the present monograph sets the questions about the role of attitude in irony processing in a properly constraining experimental design.

Why study attitudes? Attitudes permeate social interactions. We do not communicate in attitudinal limbo. There is always some attitudinal significance attached to a linguistic contents of a message. In everyday inter-

actions we are as keen on exchanging ideas, sharing information, as on imparting our emotional biases to these ideas: Attitudes. In this light, it might seem puzzling that language and attitude interface remains so markedly under-researched an area of communicative interaction. While quite a lot is known about the role of affective nonverbal cues in communication and their impact on communicative meaning, surprisingly little is known about the role of affective contents literally and figuratively imparted by verbal cues (cf. Hunston and Thomson 2000; Martin and White 2005). Attitude-and-language interface has hardly been systematically explored, as attitude and language have been considered rather unrelated research venues: Independent, autonomous and unrelated disciplines, pursuing their own discipline-specific questions by means of the discipline-specific methods (cf. Janney 1996). The consequence of this autonomy-driven approach is that language and verbal communication have been researched as if affect, and its multiple emotional contours, held no constant sway over human communication. As if there were hardly any relevant interactions between language and affect going on at every moment in everyday interactions.

The present monograph aims to bridge the gap between linguistic and attitude-related aspects of communication. Naturally, an attempt at examining how the attitudinal contents interacts with the verbal contents, and explaining how their intrinsic interrelatedness impacts communicative meaning, calls for an interdisciplinary framework of investigation. The book assumes an interdisciplinary approach to account for the attitudinal meaning phenomenon, based on evidence coming from three distinct, but complementary research disciplines: (i) linguistic research on the verbal means of expressing attitude, (ii) psychological inferential mechanisms involved in attitude comprehension, (iii) neurophysiological infrastructure involved in attitude processing at electro-chemical level of brain systems. Insights from these neighboring disciplines dedicated to studying attitude at different, yet complementary levels, will serve as reference points for investigating attitude and language interface in experimental pragmatics paradigm.

Building such an interdisciplinary platform for the investigation of message-level attitudinal meaning, is a challenge that seems best met by adopting an exploratory approach. Message-level attitudinal meaning so far has not been clearly defined, explored, or explained, therefore this monograph presents theories, hypotheses, and empirical evidence that pertain to attitude and the wide range spectrum of its effects, and is poten-

tially insightful in explaining the phenomenon of attitude. Throughout chapters the explorations proceed by accumulation of interdisciplinary insights, shedding light on the various mechanisms involved in attitudinal contents processing. This exploratory approach comes though with what might seem a potential shortcoming. It tries to combine separate lines of research in one perspective, rather than focuses on criticizing weaknesses or shortcomings of some attempts, at the expense of others. Of course, some accounts presented here are not free from drawbacks. Especially those that pioneered to explore the phenomenon at new empirical levels. Those pioneering accounts and their hypotheses were often formed in relevant research vacuum. There were no previous studies to refer to. Therefore, often these early hypotheses were later disconfirmed, and rejected by more elaborate research methods, and more discerning hypotheses. It is not my intention to criticize these pioneering approaches, but to use them as a springboard for building an empirical account for the exploration of attitudinal meaning in experimental perspective.

The first chapter sets the ground for the exploration of pragmatic meaning in general and attitudinal meaning in specific. The main idea underbracing this chapter is that people communicate to speak their minds: Express their thoughts (what they think), and feelings (how they feel). Two qualitatively different and complementary systems of signaling thought and feeling contents, are described: Linguistic (words) and extra-linguistic cues (e.g. mimicry, gestures, prosody). This chapter focuses on two key pragmatic issues: (1) the commodity of communication – the fabrics of communicative meaning, and the manner of communication, and how what we say and how we say, constrains the interpretation of communicative meaning. (2) the inferential infrastructure for communicative meaning comprehension. The central claim of this chapter is that to be able to explain how we know what others mean by what they say, we need to know in graphic detail what makes pragmatic meaning, and how the linguistic and extra-linguistic effects conspire to produce the contextualized meaning. Plus, we need to understand what mechanisms gear the inferential processes, and what is the mechanics underpinning the comprehension. Therefore, not only the behavioral (verbal) and mental aspects of pragmatic inferencing (theory of mind mechanism) are discussed here as crucially relevant for message processing, but also the physiological and neural networks (e.g. somatic marker mechanisms) are brought to notice as essentially involved in handling the inferential cargo of communication. This chapter concludes

with a proposal that communicative comprehension in general, and the comprehension of attitudinal significance in specific, are strongly rooted in anticipatory mechanics that evolved to predict the upcoming bits of communicative codes (linguistic, affective, social), and that both the affective and the cognitive contents of communication, constitute the essential texture of human communication story.

Chapter two zooms on attitude. Its primary claim is that in communication people care not only about the information (idea) they want to share with others, but also about their attitudes (emotional relation) to what they say, or who they say it to. This attitudinal load may be linguistically marked (evaluative lexis, syntax, prosody) by what one says, and/or non-linguistically colored by how one says it (kinesics: Smiling/frowning, intensity, prosody). In human communication there is always some attitude, some emotional significance attached to whatever is said. Verbal contents and attitude are irrevocably connected in speech. Utterances in addition to signaling their linguistic meaning, provide emotive perspectives on speaker's attitude to the contents, the context, or the interlocutors. Utterances, as if by definition, convey built-in attitudinal significance, the speaker's explicit and/or implicit emotive standpoint. Linguistic and paralinguistic means of signaling attitudes in speech are multiple, and usually they are tightly interrelated. This chapter investigates the following issues: (1) how attitudes are encoded in messages, (2) how attitudes are processed, (3) how the affective cues shape communication and facilitate its comprehension. In communication, next to making reliable guesses about what others think, we need to make reliable inferences about what others feel, what are their emotional attitudes. Attitudes serve quite essential functions in human interactions. They are crucial for building, shaping, and maintaining relations. This chapter discusses the attitudinal significance in micro (word) and macro (utterance) level, in an attempt at explaining how attitudes mean, and how they impact message processing. The discussion begins with the presentation of the construct of attitude, its definition, structure, and functions. This chapter puts forward a claim that for pragmatic empirical research to be able to account for the affective effects in communication, it needs to study attitude in its propositional (verbal, lexical) effects as well as in its non-propositional (nonverbal) aspects (tone of voice, prosody, mimicry, gestures). These explorations set the scene for the investigation of implicit attitudes in the following chapter.

Chapter three is about a special type of implicit attitude: Irony. Irony has continued to puzzle researchers for centuries, yet so far research has not provided definite and clear-cut answers as to what irony is, or what makes the essence of ironicity, and what mechanisms are involved in irony construction, comprehension, and processing. The reason for this state of affairs is that irony is a complex communicative phenomenon, used to perform multiple social and interactional functions. To make the picture even more complicated, a diverse set of irony vehicles, verbal and non-verbal, may be employed to manifest numerous facets of ironicity. In order to embrace the puzzling nature of irony, and explain how it is processed, the present chapter focuses on the following set of features that conspire to generate ironic meaning: (i) the evaluative significance of ironic comments (e.g. mocking, complimenting), (ii) the asymmetry in evaluative attitudes irony imparts (e.g. praising irony, critical irony), (iii) the nonverbal markers of irony (tone of voice, facial expressions), (iv) the verbal markers of ironicity (e.g. literal/non-literal meaning dichotomy, situation-comment incongruity), (v) the implicit nature of ironic effects (the non-propositional meaning).

This chapter presents state of the art irony comprehension theories, and discusses empirical evidence that the processing-oriented research has produced. It names the shortcomings of the extant irony research, and proposes to modify the experimental designs that have been traditionally used to study irony processing (literal vs. non-literal meaning), by explicit factoring in attitude as an experimental variable directly relevant for irony processing patterns. It ends with a conclusion that if attitude remains ignored as an intrinsic variable, irony research will continue to produce misleading results.

Chapter four is an experimental attempt at testing the role of attitudinal significance in verbal message processing. Two studies were designed to explicitly test attitudinal contents processing, and offer experimental evidence on how the emotional contents impacts verbal message comprehension in terms of processing patterns. Two types of overt attitudes – literal praise and literal criticism, one type of covert attitude – ironic criticism, were explored in two processing modes: Explicit and implicit. In the explicit evaluative study, participants overtly evaluated (Experiment 1, 2) whether the comments embedded in communicative interactions expressed favorable, positive or unfavorable, negative attitudes. For the explicit evaluative study emotive decision task was employed. In the im-

PLICIT evaluative study (Experiment 3, 4) participants overtly performed a lexical decision task, yet the stimuli they processed contained the same set of explicit and implicit attitudes tested in experiment 1 and 2. The goal of testing the same set of attitudes in an explicit and implicit processing mode, was to find out whether message-level attitudes, contained in 2-sentence interactions, would produce convergent processing patterns irrespective of the processing mode, as has been observed for simple attitudes at word level. Additionally, these two studies aimed at establishing the processing patterns, in terms of speed and accuracy, for the literally expressed (praise, criticism) versus the non-literally imparted attitudes (critical irony). More general aim was to test to what extent the attitudinal contents, so far neglected in language processing studies, holds a sway over message processing patterns. Next to testing attitudinal effects in message processing, I also wanted to find out whether the overt and covert attitudinal contents processing, would produce convergent or divergent patterns in the emotive task study and the lexical task study. Still another aim was to find out whether the evaluative contents processing would generate convergent or divergent processing patterns in the two languages of the study participants: L1 (Polish) and L2 (English).

The data (response times, error rates) in both studies present a consistent pattern of facilitated processing of positive attitudes (literal praise) and delayed processing of negative attitudes (literal criticism) irrespective of the processing mode (explicit, implicit evaluation), task (emotive decision vs. lexical decision), input pacing conditions (self-paced; response window; ISI 0; ISI 1000), and the language tested (Polish, English). The implicitly communicated attitude – irony, was processed longer than the positive attitudes (praise), and faster than the negative attitudes (criticism). Attitudinal contents processing showed congruent latency and accuracy patterns in both modes of processing (explicit, implicit) and for both languages. This evidence, consistently manifesting fast and smooth (high accuracy ratio) positive attitude, and slow and rough (low accuracy rate) negative attitude processing, was observed irrespective of the task, time imposed, and language. Whether the stimuli were processed in Polish or English, the same processing patterns were obtained. This might be taken to indicate that in case of attitudinal contents processing, the cognitive aspects of the stimuli – the language, the task, and the imposed speed of processing, are of secondary importance. Of primary importance is the attitude-carrying load and its valence (positive, negative value). These

findings corroborate affective primacy hypothesis, and are consistent with the positivity offset and negativity bias – two well-known mechanisms underpinning the physiology and psychology of positive and negative stimuli processing.

Chapter five aims to account for the results of the experimental studies presented in chapter 4, focusing on two main findings: Automaticity and asymmetry in attitudinal meaning processing. This chapter sets the findings in a wider research background in order to demonstrate that the same psychological and physiological mechanisms underpin complex message-level attitude processing, as they do in case of simple attitude cues (word, picture). Both the automaticity and the asymmetry observed for message-level attitudinal meaning processing, seem to be driven by the ancient evolutionary mechanics evolved to secure and maintain life. It seems commendable to settle the explorations on attitude processing, at the level of its physiological mechanisms, since the inferential comprehension involved in attitudinal meaning processing is not performed in a physiological vacuum.

This chapter seeks to account for the strikingly consistent processing patterns observed for the positive valence (swift and smooth), and negative valence (slow and taxing) by reference to the mechanics of the positivity offset and negativity bias, underpinning valence processing. Biological (evolutionary), physiological and neurological, as well as behavioral language-related levels are discussed to picture how these physiologically ancient patterns underpin on-line attitudinal contents processing. Review of the relevant literature shows that this characteristic valence asymmetry, manifesting itself in swift and smooth positive valence processing, and tardy and rough negative valence processing patterns, has been amply observed for simple and complex, non-linguistic and linguistic stimuli alike. This chapter concludes that in order to fully explore and explain how the positivity offset and negativity bias underpin and shape communicative valence processing, research needs to bridge the gap between physiological, psychological and behavioral mechanisms, and account for their respective involvement at various stages of attitudinal meaning comprehension. On top of that, it shows that attitude and its valence pervade and shape communicative meaning comprehension at much deeper level than it has been so far assumed.