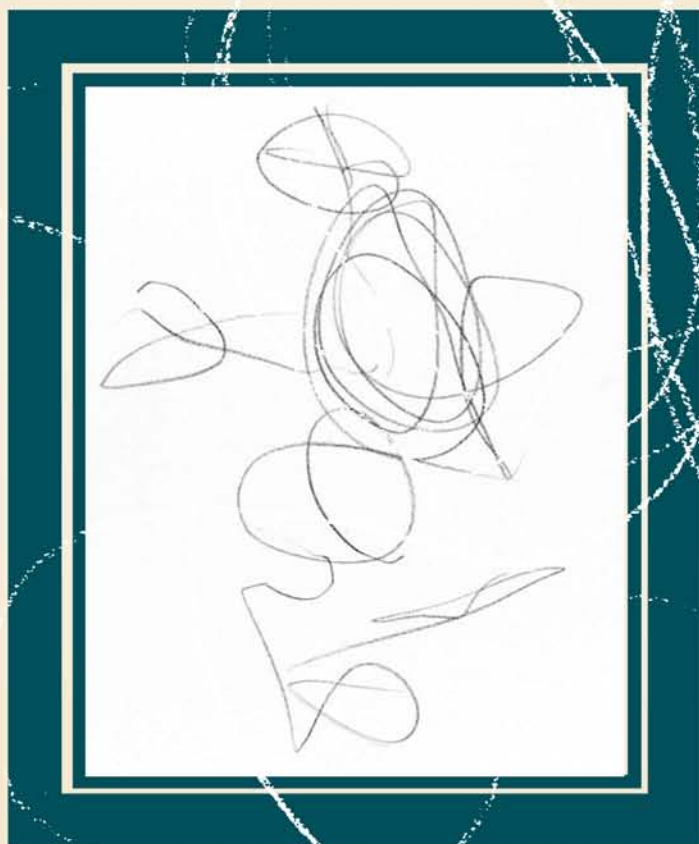


# IRONY IN LANGUAGE AND THOUGHT



A Cognitive Science Reader

EDITED BY

RAYMOND W. GIBBS, JR. • HERBERT L. COLSTON

# IRONY IN LANGUAGE AND THOUGHT

**A Cognitive Science Reader**



# IRONY IN LANGUAGE AND THOUGHT

A Cognitive Science Reader

*Edited by*

Raymond W. Gibbs, Jr.

*University of California, Santa Cruz*

*and*

Herbert L. Colston

*University of Wisconsin, Parkside*



Lawrence Erlbaum Associates  
Taylor & Francis Group

---

New York London

Cover design by Katherine Houghtaling Lacey.

Cover artwork by Morgan Gibbs Colston. Father Figure, 2002; paraffin crayon on paper, 46 × 30 cm, private collection.

Lawrence Erlbaum Associates  
Taylor & Francis Group  
270 Madison Avenue  
New York, NY 10016

Lawrence Erlbaum Associates  
Taylor & Francis Group  
2 Park Square  
Milton Park, Abingdon  
Oxon OX14 4RN

© 2007 by Taylor & Francis Group, LLC

Lawrence Erlbaum Associates is an imprint of Taylor & Francis Group, an Informa business

Printed in the United States of America on acid-free paper

10 9 8 7 6 5 4 3 2 1

International Standard Book Number-13: 978-0-8058-6062-7 (Softcover) 978-0-8058-6061-0 (Hardcover)

No part of this book may be reprinted, reproduced, transmitted, or utilized in any form by any electronic, mechanical, or other means, now known or hereafter invented, including photocopying, microfilming, and recording, or in any information storage or retrieval system, without written permission from the publishers.

**Trademark Notice:** Product or corporate names may be trademarks or registered trademarks, and are used only for identification and explanation without intent to infringe.

---

#### Library of Congress Cataloging-in-Publication Data

---

Irony in language and thought : a cognitive science reader / edited by Herbert L.  
Colston and Raymond W. Gibbs, Jr.

p. cm.

Includes bibliographical references and index.

ISBN 978-0-8058-6062-7 (pbk. : alk. paper) -- ISBN 978-0-8058-6061-0 (alk. paper)

-- ISBN 978-1-4106-1668-5 (e-book)

1. Irony. I. Colston, Herbert L. II. Gibbs, Raymond W. III. Title.

P301.5.I73I76 2007

809'.918--dc22

2006037734

---

Visit the Taylor & Francis Web site at  
<http://www.taylorandfrancis.com>

and the LEA Web site at  
<http://www.erlbaum.com>

# Contents

Preface	ix
<b>PART I. INTRODUCTION</b>	
1 A Brief History of Irony <i>Herbert L. Colston &amp; Raymond W. Gibbs, Jr.</i>	3
<b>PART II. THEORIES OF IRONY</b>	
2 On the Pretense Theory of Irony <i>Herbert H. Clark &amp; Richard J. Gerrig</i>	25
3 On Verbal Irony <i>Deirdre Wilson &amp; Dan Sperber</i>	35
4 How About Another Piece of Pie: The Allusional Pretense Theory of Discourse Irony <i>Sachi Kumon-Nakamura, Sam Glucksberg, &amp; Mary Brown</i>	57
5 On Necessary Conditions for Verbal Irony Comprehension <i>Herbert L. Colston</i>	97
6 Irony As Relevant Inappropriateness <i>Salvatore Attardo</i>	135
<b>PART III. CONTEXT IN IRONY COMPREHENSION</b>	
7 On the Psycholinguistics of Sarcasm <i>Raymond W. Gibbs, Jr.</i>	173

<b>8</b>	Irony: Context and Salience <i>Rachel Giora &amp; Ofer Fein</i>	201
<b>9</b>	Neuropsychological Studies of Sarcasm <i>Skye McDonald</i>	217
<b>10</b>	Discourse Factors That Influence Online Reading of Metaphor and Irony <i>Penny M. Pexman, Todd R. Ferretti, &amp; Albert N. Katz</i>	231
<b>11</b>	Obligatory Processing of Literal Meaning of Ironic Utterances: Further Evidence <i>John Schwoebel, Shelly Dews, Ellen Winner, &amp; Kavitha Srinivas</i>	253
<b>12</b>	Irony: Negation, Echo, and Metarepresentation <i>Carmen Curco</i>	269
 <b>PART IV: THE SOCIAL FUNCTIONS OF IRONY</b>		
<b>13</b>	Why Not Say It Directly? The Social Functions of Irony <i>Shelly Dews, Joan Kaplan, &amp; Ellen Winner</i>	297
<b>14</b>	Salting a Wound or Sugaring a Pill: The Pragmatic Functions of Ironic Criticism <i>Herbert L. Colston</i>	319
<b>15</b>	Irony in Talk Among Friends <i>Raymond W. Gibbs, Jr.</i>	339
<b>16</b>	From “Blame by Praise” to “Praise by Blame:” Analysis of Vocal Patterns in Ironic Communication <i>Luigi Anolli, Rita Ciceri, &amp; Maria G. Infantino</i>	361
<b>17</b>	Responding to Irony in Different Contexts: On Cognition in Conversation <i>Helga Kotthoff</i>	381

**PART V: DEVELOPMENT OF IRONY UNDERSTANDING**

- 18** A Developmental Test of Theoretical Perspectives on the Understanding of Verbal Irony: Children's Recognition of Allusion and Pragmatic Insincerity 409  
*Marlena A. Creusere*
- 19** Children's Comprehension of Critical and Complimentary Forms of Verbal Irony 425  
*Jeffrey T. Hancock, Philip J. Dunham, & Kelly Purdy*
- 20** Children's Perceptions of the Social Functions of Verbal Irony 447  
*Melanie Harris Glenwright & Penny M. Pexman*

**PART VI: SITUATIONAL IRONY: A CONCEPT OF EVENTS GONE AWRY**

- 21** Situational Irony: A Concept of Events Gone Awry 467  
*Joan Lucariello*
- 22** Verbal Irony As Implicit Display of Ironic Environment: Distinguishing Ironic Utterances From Nonirony 499  
*Akira Utsumi*
- 23** The Bicoherence Theory of Situational Irony 531  
*Cameron Shelley*

**PART VII: CONCLUSION**

- 24** The Future of Irony Studies 581  
*Raymond W. Gibbs, Jr. & Herbert L. Colston*
- Author Index 595
- Subject Index 605





## Preface

Irony is a device of both mind and language for acknowledging the gap between what is expected and what is observed. As one of the great tropes, or figures of speech, irony has been discussed and debated for thousands of years by all those interested in rhetoric. In recent decades it has been studied as a special mode of thought, perhaps used by all individuals, and thus one of many conceptual devices in the poetics of mind. Although classical studies focused on different forms of irony (e.g., tragic, Socratic, irony of fate), late 20th-century scholars, especially philosophers and linguists, have explored the ways that ironic speech conveys pragmatic meaning. One major theory is that irony is understood as a secondary meaning after the primary semantic meaning has been analyzed and rejected in the present context. Starting in the mid 1980s, experimental psycholinguists and linguists began exploring the implications of this traditional pragmatic view for psychological theories of how people understand figurative language, with irony being a special case where a speaker contextually implies, at least seemingly, the opposite of what was literally said. Over the past 25 years, dozens of experiments and many discourse studies have emerged that generally suggest a far more complicated view of irony, how it is understood, the way it is acquired, its social functions, and the ways that ironic language reflects individuals' ironic conceptualizations of their own experiences and the world around them. Unlike previous explorations of irony, in both language and thought, this recent work has a strong empirical foundation where scholars aim to compare and contrast different forms of irony use against other figurative and non-figurative modes of thinking and speaking.

The purpose of "Irony in language and thought: A cognitive science reader" is to offer students of irony an overview of the major works within cognitive science on the nature, function, and understanding of irony. This volume fills a significant gap in the literature on figurative language and thought. Although there are dozens of books on metaphor alone, very few books have been devoted exclusively to irony in its different forms, despite the increasing popularity of studies of irony and individual theories of irony use and understanding. We have collected those articles that are among the most widely cited in the interdisciplinary study of irony within disciplines encompassing the cognitive sciences, and have included several others that

are likely to have impact on the conduct of research in the near future. These articles are roughly divided into five different sections: theories of irony, context in irony comprehension, the social functions of irony, development of irony understanding, and situational irony. We offer a more extensive overview of these works and situate them within the historical context of irony research in an introductory chapter. Our thoughts on the future of irony studies are provided in a concluding section. "Irony in language and thought: A cognitive science reader" surely best represents the important past on irony research. Yet we offer this collection in the hope that a comprehensive look at the complexity of irony in thought and language will generate new theories and empirical research, and give irony its proper recognition within cognitive science as a fundamental property of mind.

We thank the authors of these papers for their fine work and their agreement to republish the articles. We also thank Cathleen Petree of Lawrence Erlbaum Associates for all her assistance in making this project a reality.

PART I

**INTRODUCTION**



## CHAPTER 1

# A Brief History of Irony

Herbert L. Colston

*University of Wisconsin–Parkside*

Raymond W. Gibbs, Jr.

*University of California, Santa Cruz*

The scholarly investigation of irony has a very old history and a very broad base. Thinking and commentary about irony in all its forms goes back to some of the earliest recorded philosophical works. The historical and contemporary studies of irony can also be found in fields as diverse as anthropology, literature studies, linguistics, cognitive-, social-, language-, and even clinical-psychology, philosophy, cultural studies and more. And the topics related to irony are as widely arrayed as art, literature, dance, music, media, language, speech, image, thought, cartoons, journalism, theater, politics, situations and many others.

To offer a usable compilation of this incredible history and diversity of irony is an impossible task. We thus chose to limit our scope to the modern study of irony as predominantly related to thought and language. But even such a narrowing of the topic does not make full coverage possible. A great number of scholars, scientists and researchers of many types have published important works in the modern study of irony. We simply could not have included even a small fraction of this work and still obtain a volume not requiring a wheelbarrow. So we instead had to be incredibly selective in our choice of papers.

This volume contains what we have taken to be some of the most influential and important contributions to the modern cognitive scientific study of irony. These works come from a variety of fields and have been published in a wide diversity of international journals in a number of different disciplines. Despite this variety of venues, however, the works have all honed in on what we see as the most central topics to have been addressed. These topics correspond to the main sections of this reader: Theories of Irony—addressing primarily comprehension of its verbal form, Context in Irony Comprehension, Social Functions of Irony, the Development of Irony Understanding, and Situational Irony. We hope putting all these works under one volume will help catalyze future work on irony.

What follows is a very brief attempt at an overview of these central topics in the modern scholarly pursuit of irony. By no means should this be considered an all-inclusive review. Rather, we seek to lend some perspective to the studies we've included, to enable the reader to see how these works have furthered the field.

## THEORIES OF IRONY

One might initially ask why a theory of irony is needed. Whether we are discussing verbal irony—where a speaker says something that seems to be the opposite of what they mean, or situational irony—where some situation in the world is just contradictory, why is a theory required when both of these kinds of irony seem to be relatively straightforward concepts? The answer is that for both verbal and situational irony, one simply cannot explain the phenomena with “straightforward” solutions like take-the-opposite-meaning, or irony-is-simple-contradiction. Most, and arguably all, instances of what is comprehended from an utterance of verbal irony simply does not correspond to the opposite of that utterance, because it is rarely clear, 1) what the opposite of an utterance's literal meaning is, and 2) what in fact even that literal meaning itself is (Brown, 1980; Gibbs & O'Brien, 1991). Additionally, there are a wide variety of instances subsumed under or near the umbrella of situational irony that don't necessarily fit the definition of a contradiction (e.g., coincidences, deviations from predictions, counterfactuals, frame shifts, juxtapositions of bi-coherences, hypocrisy, etc.). Moreover, the mere fact that a host of theories have been presented in an attempt to grapple with verbal and situational irony is itself indicative of the relative intractable nature of these phenomena. It is thus clear that we just cannot get away with seemingly simple solutions that, although possibly resembling what occurs in some prototypical instances of verbal or situational irony, by no means precisely explain those instances nor go anywhere near encompassing all the phenomena considered part of, or related to, the phenomena of irony.

In an attempt to theoretically corral this phenomenon of irony, several theories have been proposed from linguistic, philosophical and psychological backgrounds. Interestingly and arguably, none of these theories has predominated the interdisciplinary group of scholars studying irony, nor has any one been seriously struck down. Rather, they each offer a different perspective on the phenomenon, or use a different theoretical framework in their explication. In reality then, they are all likely explaining a portion of the phenomenon, or one of a variety of mechanisms underlying the comprehension of the phenomenon, without necessarily being incompatible with one another (Colston, 2000). Whether this means that a broader theoretical attempt is required, perhaps one based on an abstract notion such as constraint satisfaction (see Katz, 2005), or whether irony is simply a family of related phenomena that each require their own theoretical approach, remains to be seen. For now, let us just briefly discuss the key theoretical approaches in the current status of the field.

The idea that verbal irony is broader than a simple solution to a linguistic problem is key to several of the theories proposed in the included papers. For instance,

Wilson and Sperber (1992) argued that a speaker who uses verbal irony is employing a long-standing philosophical distinction between use and mention. This distinction allows for the difference between using a remark to express one's true position or feeling, versus the mention of, or reference to, a particular position or feeling that one isn't currently expressing. This use/mention distinction opens up the possibility for then making reference to some state of affairs that was predicted, expected or desired, either because of some explicit prediction or based upon a mutually shared domain of knowledge. For instance, if a basketball player uses the ironic utterance, "Nice shot" to condemn a fellow player who misses a game-winning basket, she could be mentioning an explicit prediction by say a bystander, who perhaps said, "This is going to be a nice shot," while the basketball shooter was preparing to throw the ball. Or she could be mentioning the general expectation or desire for good play. This mention or echo of predicted or known events in the midst of unexpected or undesired reality is a key contribution in our thinking about verbal irony.

In a different approach, Clark and Gerrig (1984) proposed that verbal irony is really an instance of role playing that must be recognized as such for correct comprehension. According to Clark and Gerrig, a speaker using verbal irony is "pretending to be an injudicious person speaking to an uninitiated audience; the speaker intends the addressees of the irony to discover the pretense and thereby see his or her attitude toward the speaker, the audience, and the comment" (1984). A speaker of verbal irony is thus acting out what a person other than himself or herself might feel, think, believe and say about some situation, and moreover, is portraying, at least typically, that character in an unbecoming light to essentially distance himself or herself from the position advocated by that character, and likely even to belittle that viewpoint.

One particular advantage of the pretense account is the readiness with which it handles derivation of an ironic speaker's negative (again, typically) attitude (although see Gibbs, 2000, for a treatment of jocular forms of irony, as well as Colston, 2000; Hancock, Dunham, & Purdy, 2000; Schwoebel, Dews, Winner, & Srinivas, 2000; Harris & Pexman, 2003; Anolli, Ciceri, & Infantino, 2000; Dews, Kaplan, & Winner, 1995; Kreuz & Link, 2002, for treatments of ironic praise). By basing the decryption of an ironic utterance on the recognition of the different roles in a speech-actor's portrayal, the personality characteristics given to the portrayed character are brought very much to the forefront of explanation. So a speaker/actor who portrays a character as being an idiot, for instance, with the common acting techniques of voice tone, facial expression, nonverbal cues, etc., is very clearly revealing their negative attitude toward that character and, accordingly, the position the character is advocating. The speaker/actor could just as easily have portrayed the character in a more appealing light and is thus making his or her attitude clear given that he or she has selected it from a number of possibilities.

An approach that in some ways weds the different notions of pretense and echo, but that makes some unique claims of its own is the Allusional Pretense Theory of Discourse Irony (Kumon-Nakamura, Glucksberg, & Brown, 1995). This account



returned to a speech-act analysis of verbal irony comprehension based upon felicity conditions for well formed speech acts. Allusional Pretense claims that utterances of verbal irony must 1) violate the sincerity felicity condition, and 2) occur in the instance of a violation of expectations. Most accounts of verbal irony share the second condition. The first condition, however, enabled explanation of instances where a speaker does not strictly echo, because she neither re-mentions previous predictions or statements nor reminds addressees/hearers of common beliefs or desires. Utterances such as true assertions (e.g., “You sure know a lot,” said to a know-it-all), questions (e.g., “How old did you say you were,” spoken to someone acting childish), offerings (e.g., “How about another small slice of pizza?” said to a glutton), and over-polite requests (e.g., “Would you mind very much if I asked you to consider cleaning up your room some time this year?” said to a slob) were brought under the explanatory fold by this account.

The two claims of the Allusional Pretense account, and indeed in one form or another the dominant claims found in most of the theories of verbal irony comprehension—1) that verbal irony requires a violation of expectations, and 2) that it requires violation of felicity conditions for well-formed speech acts, was addressed by Colston (2000). This work sought to evaluate these claims with explicit empirical tests. Evidence was found to support the first claim concerning violation of expectations. Indeed, even in instances where no such violation was indicated, comprehenders of verbal irony were shown to have *inferred* such a violation on the part of the speaker. It thus appears that this condition is required for verbal irony comprehension. The second claim concerning felicity conditions for well-formed speech acts, however, was argued to be too narrow. A set of utterances of verbal irony was shown to adhere to these felicity conditions and yet still be interpreted ironically. A broader second condition was recommended that was based upon a violation of Gricean Maxims. A third condition that involved portraying a contrast of current events with expected ones was also proposed.

The Attardo (2001) article is the most recent contribution to the theoretical discussion of irony discussed here. This paper first presents a very thorough review of some of the definitional issues surrounding verbal irony, and then reviews the views of irony both as a figure of speech and as an insincere speech act. The family of “mention” theories of irony comprehension are then criticized for being unable to encompass a wide enough array of irony examples to serve as an encompassing theory of comprehension. Pretense is included in this discussion, but in our opinion is fairly treated as a much broader phenomenon, allowing explanation of dramatic and situational irony. Attardo then moves on to a criticism of psycholinguistic accounts of irony understanding, including Gibbs’s (Gibbs, 1986, 1994; Gibbs & O’Brien, 1991) direct access comprehension mechanism and the Relevance theoretic approach, that call for a one-stage model of irony comprehension. The paper then concludes with an exposition of an irony comprehension account based upon relevant inappropriateness.

Most prevalent in Attardo’s (2001) criticism of direct access is the argument that a one-stage processing approach “is logically incapable of accounting for novel in-

put, since it will fail to differentiate between a semantically ill-formed sentence and a novel instance of metaphor, irony or other indirect figure of speech, etc.” Certainly from a linguistic perspective such an argument seems apt. However, it fails to consider the rich body of knowledge from psycholinguistic studies of all forms of language processing and indeed much of what is known about other realms of cognitive processes, that show varieties of dependencies upon contextual sources and linguistic input, and the intricate parallel blends of processing that can occur during different kinds of cognition. Indeed, recent psycholinguistic studies have shown that the mere knowledge of the occupation of a speaker can alter the very lowest levels of online processing of figurative language (see Katz, 2005, for a review), and indeed a variety of heretofore “psychological” or “contextual” influences (e.g., mood, emotional state, physiological status, and a vast array of others) have been shown to have tremendous impact on many allegedly impenetrable cognitive, perceptual and even sensory processes. There is thus a great body of evidence against the view that processing, linguistic and otherwise, involves multiple, sequential, distinct, impenetrable stages. Rather, processing can be influenced by parallel, multiple, and interacting sources of information (see Colston, 2005, for this argument in greater detail). Thus, although there are possible instances of an ironic computation that could require a garden-path type of two-stage meaning recomputation, most instances are more likely one-stage operations where contextual information is readily-enough deterministic and available at the earliest onset of processing to enable parallel processing of context and linguistic input to produce the ironic comprehension product directly.

One of the most important contributions of the Attardo (2001) paper is the detailed explication of the emerging, generally agreed-upon, necessary condition for an instance of ironic comprehension, involving some violation of the relevance, appropriateness, or manner in which an utterance is made. Consistent with the other enclosed paper that called for a violation of the Gricean Maxim of manner as one of three needed components of irony comprehension (Colston, 2000; the other two being a violation of expectations and a contrast of expectations and reality), Attardo specifically explicated this claim and offered a detailed discussion of differences between violations of relevance and appropriateness.

## **CONTEXT IN IRONY COMPREHENSION**

Beyond consideration of the comprehension of an utterance of verbal irony per se, other work has focused more exclusively on the role that context plays in the comprehension of verbal irony. The first paper we’ve selected on this topic is Gibbs’s (1986) article on the comprehension and memory for sarcastic irony. This paper was among the first wave of research studies that initially challenged the standard pragmatic view that ironic and indeed all forms of figurative language first undergo an encapsulated literal meaning derivation phase that then must be subsequently overwritten by a secondary figurative meaning derivation phase once contextual in-

formation has shown the literal meaning to be incorrect. The Gibbs paper made such a challenge for verbal irony.

In six experiments the study revealed that there is no need to first derive the literal meaning from ironic utterances because contextual information comes into play early in the comprehension process (irony processing took no longer than processing of the same language used literally). Ironic language was also processed faster if it explicitly echoed previously mentioned beliefs or norms, also indicating the importance of context in irony comprehension. Memory for sarcastic utterances was also better than memory for the same utterances used literally, and explicit echo of previous information also increased memory for sarcastic utterances. The latter two memory results demonstrate the key role of context in irony cognition because, other than the greater involvement of contextual information in ironic remarks, especially ironic remarks that involve explicit echo, the utterances themselves were kept identical.

In challenging the then well-accepted standard pragmatic view of figurative language comprehension, the results of the Gibbs (1986) paper were sure to attract the attention of divergent accounts. The next paper we included is representative of works that have addressed the different claims and evidence of Gibbs's direct access account and more traditional accounts of verbal irony processing. Giora and Fein (1999) offered an account that proposed the concept of salient meaning to encompass the divergent to-date findings. Salient meanings are argued to be those that are always activated and always activated first. But they are not necessarily the same things as "literal" meanings. Instead, salient meanings are affected by conventionality, frequency, familiarity and prototypicality.

In two experiments, Giora and Fein (1999) found evidence to support the role of salient meaning in irony processing. In general, if the literal meanings of ironic utterances were coded in the lexicon (if the ironies were unfamiliar, for instance) then ironic processing took longer relative to ironies whose literal meanings were not lexically coded (familiar ironies). Giora and Fein thus concluded that direct access "may be a function of meaning salience, rather than of context effects."

The next study (Pexman, Ferretti, & Katz, 2000) took the evaluation of context, salience and processing to a new level by using a moving window paradigm than can more precisely reveal online processing of verbal irony. This study, which followed an early work on memory for sarcastic utterances that employed the same experimental materials and thus enabled correlational analysis between the two studies (Katz & Pexman, 1997), revealed a complex interaction of factors in irony processing. Contextual factors such as the occupation of the speaker, discourse factors like the nature of the discourse preceding the ironic utterance, the familiarity of the statement being made and the nature of the counterfactuality presented in the discourse, all play a role in very early processing of ironic utterances. The authors concluded that graded salience *and* contextual factors are operating in verbal irony comprehension.

The relationship between processing and memory of ironic utterances, first explored by the Gibbs (1986) paper, was also corroborated in the Pexman, Ferretti,

and Katz (2000) study. Recall that Gibbs found greater memory as well as faster reading times for echoic sarcastic utterances, relative to nonechoic, suggesting that something about the enhanced processing seems to lead to greater memory. The Pexman, Ferretti, and Katz paper found that both the degree of sarcasm and the likelihood of subsequent memory are predicted by specific amounts of times spent pausing at the word stream that immediately follows the sarcastic utterances.

The next paper comes from a very different perspective in using neuropsychological work to address the role of context in irony processing. The McDonald (2000) paper discusses two kinds of brain damage and how they differentially affect people's abilities with respect to verbal irony. People with damage to their brain's right hemisphere (RH) and people who've suffered traumatic brain injury (TBI) both show deficits of various kinds in their cognitive abilities, which in turn can affect their ability to understand verbal irony.

RH patients in very general terms have difficulty incorporating prosodic cues in the processing of irony, they have a diminished ability to infer the emotional states of ironic speakers, and they may have difficulty in understanding what is on the minds of other people. TBI patients generally show a greater loss of "communication" skill, relative to full language aphasia, and as a consequence can show an increased literal-mindedness in language comprehension. Their comprehension difficulties seem less directly related to emotional assessment problems, but rather seem influenced by more general inferential reasoning deficiencies. Most interesting for issues related to context, TBI patients also seem most impaired when the contradiction inherent in an ironic utterance is restricted to other utterances. When the contradictions are against other situational contextual cues, then performance improves. As an end result, TBI patients seem least affected at detection of irony, and most impaired at gleaning the illocutionary force of ironic utterances.

What these findings show is that much of the "normal" comprehension of verbal irony lies in mechanisms outside of pure "language" processing. Abilities such as prosodic evaluation, emotional assessment, flexible incorporation of related conceptual information, inference generation and theory of mind, are all deficient to one degree or another in RH and TBI patients, without there being significant parallel deficiencies in pure language abilities (e.g., aphasia is rare in these patients). That these patients then show straightforward difficulties in aspects of verbal irony comprehension thus singles out the importance of such processes for irony cognition.

Schwoebel, Dews, Winner, and Srinivas (2000) is the next paper we included from the literature on context in irony processing. This study revisited the different claims and evidence of direct access, the standard pragmatic model, and graded salience. The study attempted to establish the exact point at which the processing of an ironic utterance would slow down because of activation of the literal meaning of the utterance. Such a lag is universally claimed to happen by the standard pragmatic model, and is also claimed to happen by graded salience if the ironic meaning of the utterance is not overly conventional. None of the items used in this study were conventional ironies in this way. The study also attempted to test whether such a literal

meaning activation would linger in the processing stream and slow down subsequent processing (the spillover effect).

The study broke the key ironic utterances into three phrases, the first containing words/phrases up to the key word that made the utterance ironic. The second being the ironic words/phrases. The third was the remaining words/phrases in the utterance (e.g., said about an unintelligent person, "That guy / is brilliant / at answering questions"). Matched literal versions were also used (e.g., the same utterance as above said about an intelligent person). Participants then read through these broken sections of the utterances and reading times were recorded for each segment. The main finding was that the second phrases showed a difference between ironic and literal contexts, with ironic phrases (e.g., "is brilliant," about an unintelligent person) taking longer to read than literal phrases (e.g., "is brilliant," about an intelligent person). No differences were found in the first and third phrases. This study thus seems to show that the ironic readings are taking longer, possibly because of literal meaning activation.

There are some anomalies in this study, however, as well as some more global problems with the use of such reading time methodologies, particularly ones that so drastically dissect utterances for reading, that bear mentioning. First, the effect described above held only for ironic criticism. When ironic praise was evaluated, no significant difference was obtained. There are some well established differences between ironic praise and ironic criticism that may be at play in this discrepancy, not least that ironic criticism is more prevalent than ironic praise. This could increase the variability on reading times for ironic praise and thus weaken the statistical analysis (although not significant, there was nonetheless a non-equivalence in that ironic readings took longer). But this doesn't clearly tie in to the different claims of direct access versus graded salience/standard pragmatic model. Secondly, on the ironic praise items, a nearly significant difference was found on the initial phrases, with literal contexts actually taking longer than ironic. Most curiously, these phrases were also identical. There is thus a possibility that some other unforeseen factors are playing a role in these processing times.

As to the methodology, the harsh dissections required by this approach to measuring onsets of latencies, may produce the very effect they are seeking to evaluate. When readers are forced to read ironic phrases in isolation, and then overtly respond before moving on, the flow of contextual information for the processing of the overall utterance is drastically interrupted, where the more bottom-up lexical information is less affected. Granted, many of the previous findings on the processing of verbal irony have made use of reading time methodologies of one sort or another, most of which imbed overt responses into normal reading of text. All of these might thus be suspect to a degree. But the one used in the Schwoebel et al. (2000) study might be more vulnerable to such criticisms due to its more minute dissection of phrases requiring responses. Nonetheless, this study is a useful contribution in that it shows that despite the frequently found overall reading time equivalence of verbal irony and literal language, there may be idiosyncratic bottom-up processing differences going on that are shrouded by more global measures.

At this point, our synopsis is that more evidence is required from more natural measures such as eye-tracking, as well as very precise evaluations of the degree to which many factors may inadvertently vary between ironic utterances and their literal controls (e.g., their degree of relevance with preceding context, the prevalence of the different forms in discourses, the aptness of the utterances, the kinds of expectation sets participants might build up in responding to items counterbalanced in ways needed for experimentation [e.g., 50% literal and 50% sarcastic utterances], and many others) before the picture on verbal irony processing is entirely clear.

The final paper we consider in this section on the role of context in irony comprehension is the recent paper by Curco (2000) that evaluated the role of negation, echo, and calculations of metarepresentations in people's comprehension of verbal irony. This paper begins with a very detailed and critical analysis of the negation view advocated by Giora and colleagues (Giora 1995; Giora & Fein, 1999). Curco argued that the negation view's criticism of the relevance theoretic approach (Sperber & Wilson, 1981, 1986; Wilson & Sperber, 1992) is invalid because it draws two incorrect conclusions from that framework, 1) that attributed thoughts must come from a person other than the speaker of a verbal irony, and 2) that instances of attitudinal dissociation from a comment must necessarily be ironic. Curco then went on to argue that as far as processing issues are concerned, the negation and relevance theoretic views are more similar than Giora and colleagues claim.

The arguably most important contributions of this paper are that it 1) very concisely and convincingly eloquates the point that complexity of processing of verbal irony may not be orthogonal to the time durations required to read written utterances of verbal irony, 2) even if such processing issues could be readily gotten at, a great deal of rich "manipulation" is at work in a speaker's use of ironic contradictions (both of these points arguably among the reasons for the growth in recent work on the social functions of irony), and 3) the importance of paying attention to the notion of metarepresentations and how these may separate verbal irony from other kinds of figurative language (see also Winner & Gardner, 1993, and Colston & Gibbs, 2002, for additional treatments of this idea).

## **THE SOCIAL FUNCTIONS OF IRONY**

The third primary topic in the contemporary cognitive science of verbal irony is what verbal irony can pragmatically and socially accomplish for speakers. This area is a relative newcomer in that most previous work on verbal irony had addressed comprehension and context. But this work holds much promise for it enables consideration of the extent to which basic cognitive, linguistic and social processes play in the social functions of verbal irony, as well as perhaps in its comprehension.

The earliest of our included papers in this section, Dews, Kaplan, and Winner (1995), opened the question as to why speakers would wish to speak ironically in a discourse (see an earlier paper, Roberts & Kreuz, 1994, that poses this question for a variety of figurative language forms). Given that irony can invite misinterpreta-

tion, why would speakers use it? This paper sought to evaluate an earlier proposed Tinge Hypothesis that verbal irony would regularly be used to diminish the criticism or condemnation brought about or intended by a speaker. This attenuated negativity is achieved by the obligatory processing of the literal positive meaning in a sarcastic utterance (Schwoebel, Dews, Winner, & Srinivas, 2000). Typically, sarcastic utterances are literally positive words used to express intended negative meanings. Listeners or readers who comprehend verbal irony are thus unable to ignore the literal (positive) meaning of a typical sarcastic (negative) utterance, which results in a diminishment of the overall degree of negativity expressed. This and another study (Dews & Winner, 1995) found evidence to support this hypothesis in that verbal irony was interpreted less negatively than direct literal commentary and thus the studies by Dews and colleagues provide supportive evidence for this account.

Another mechanism for meaning attenuation was introduced in the next included paper, Colston (1997). This work demonstrated that contrast effects can also arise in verbal irony comprehension whereby the degree of negativity expressed by a remark is actually enhanced relative to literal commentary. The mechanism for the enhancement is an influence on how negative the referent situation is seen as being. If a moderately negative situation is judged when commented upon by a literally positive remark (intended sarcastically), the perception of the situation is shifted toward the negative relative to when a literally negative remark is made. This shift is due to the ubiquitous contrast effect phenomenon whereby some perception or judgment is shifted due to a biasing context (e.g., the temperature of a liquid feels colder after first feeling a hot liquid, relative to assessing the temperature in isolation). A speaker thus causing the negative shift is viewed as being more negative in her commentary (see also Colston, 2002; Colston & O'Brien 2000a, 2000b, for further work on contrast and assimilation effects in the social functions of verbal irony).

This Contrast mechanism is not necessarily incompatible with the Tinge Hypothesis and obligatory processing claims (Colston, 1997). Rather it might be the case that various factors influence when contrast is at play versus indirect negation or tinge. More recent work has begun to address factors that might operate to tip an instance of verbal irony comprehension toward negativity enhancement versus reduction. Among these mechanisms are the degree to which a person is influenced by a negative situation (Colston, 2002), and whether one considers the listener's impression versus speaker's intent (Pexman & Olineck, 2002). But at minimum this series of studies indicates different ways in which meanings can influence one another and produce varying levels of a pragmatic function.

The Gibbs (2000) paper takes the study of the social functions of irony in a new and important direction. This paper addresses a major concern with the authenticity of language forms used in experimental studies by focusing on actual instances of language used by real speakers in real contexts (see Colston, 2005). It thus provides a much needed impetus for researchers to work with real language in their research. This study also lays the groundwork for establishing patterns and prevalences in

figurative language use in the real world. It documented quantitative differences in the frequency of different kinds of verbal irony as well as the social consequences of such use. It also moved the study of social functions of irony to discourse levels beyond that of the utterance. A key contribution of this paper is its documentation of ironic chains where speakers in a conversation will create a pattern of ironic utterances that unfolds over many turns as well as the aforementioned jocularity irony.

The Anolli, Ciceri, and Infantino paper (2002) is representative of a different approach to the study of irony, one based upon an investigation of the acoustic and prosodic patterns to the speech form. This particular paper is important for its joint attention to acoustic/prosodic patterns and their relationship vis-à-vis semantic and pragmatic phenomena concerning irony. For instance, that verbal irony can be either critical or praiseful (Colston, 1997; Dews, Kaplan, & Winner, 1995; Dews & Winner, 1995), is a well-established finding from the comprehension and use literatures, that would also very likely show a distinctive vocal pattern. Moreover, such a pattern might enable determination of underlying cognitive or other motivations for the different vocal soundprints.

This paper analyzed the acoustic/prosodic patterns of normal speech, sarcastic irony (literally positive words spoken about negative situations/persons), and kind irony (literally negative words spoken about positive situations/persons). Male undergraduates, without acting experience, read carefully designed utterances of the described types, that controlled for the number of consonants and vowels. Three acoustic/prosodic dimensions were evaluated in the recorded spoken utterances; time, pitch and energy, with five variables measured from each dimension. The results revealed distinctive patterns for both the normal versus ironic speech categories, as well as between the two kinds of ironic utterances. The findings were modeled with a circumplex with ironic type as one dimension (labeled “context,” with “cooperation” and “conflict” as poles), and “empathy” as the other (“involvement” and “estrangement” as poles). Essentially, four categories emerged. Suprasegmental traits for sarcastic irony were characteristically high and changeable pitch, strong energy and slow articulation, or, low and steady pitch, with slow articulation. The former was typical of emphatic banter where the latter was associated with blame and cold anger. For cooperative irony, suprasegmental traits were also high and changeable pitch, strong energy and slow articulation, characteristic of most instances of kind irony and also labeled emphatic banter. Or, the pattern revealed strong energy, slow articulation rate and low, monotone pitch, characteristic of a subordinate, “tender” voice.

These findings are consistent with both the previous work that has established the variable enhanced versus tinged criticism and praise of different kinds of verbal irony, as well as more recent studies that have begun to investigate factors that influence the degree of meaning enhancement/tinge (Colston, 2002; Pexman & Olineck, 2002). The additional contribution of the current paper is a testable circumplex model that encompasses multiple dimensions of context and intention. Given the influencing factors that have been proposed for enhancement and tinge



strength (degree to which a listener is influenced by negative outcomes and focus of attention on listener's impression versus speaker intent), such a circumplex model may be a viable means by which to conceptualize this aspect of irony use. That such a model was gotten at by an acoustic/prosodic approach also reveals the need for multiple levels of analysis of irony and their interrelationships.

Similar to the unique and important direction taken by the Gibbs (2000) paper described above, the Kottoff (2003) article provides a refreshing and insightful perspective on the social functions of, and to a degree the comprehension of, verbal irony. This work evaluates two authentic datasets representing distinct kinds of conversational contexts (informal—dinner conversations among friends, and formal—television debates) from an interaction analysis approach. As such, the focus is placed upon the unfolding responses to verbal irony during the conversations, and what they reveal about processing and social interaction. The findings reveal that interactants are more likely to attend to the “literally said (the dictum)” in informal contexts, as a means of catalyzing humorous interaction. In informal contexts, however, interactions respond more to the figurative meaning of ironic commentary, “the implicatum,” to satisfy the needs of public competition.

Such an approach to verbal irony can reveal much about how the form is used by interlocutors for a variety of cooperative and competitive social pragmatic functions, and can help inform the continuing struggle to understand the processing of verbal irony. As cognitive psychologists/psycholinguists who have been attempting to influence mainstream cognitive science experimentalists to pay attention to broad approaches such as interaction analysis (not to mention paying attention to theories outside of mainstream psychology of language), the criticism of laboratory methodology in the Kottoff paper and the call for broader approaches is well taken. We would hasten to add, though, that such broader perspectives, although clearly needed, do not serve as a panacea for the shortcomings of other methodological tools. Indeed, one can level the same flavor of criticism at interaction analysis that was directed at controlled laboratory studies—having too narrow a focus. Even interaction analysis omits crucial, rich, interactive phenomena (e.g., where a person was looking when speaking/hearing, facial expressions, nonverbal phenomena, and many others). Moreover, such broader perspectives fail to enable precise determination of causal mechanisms in verbal irony and other kinds of language online processing. Our view is that a variety of methodologies must be employed to understand different aspects of irony detection, comprehension, interpretation, chaining, use, and others (Colston & Katz, 2005).

## DEVELOPMENT OF IRONY UNDERSTANDING

The development of verbal irony comprehension has also been a major topic of interest by irony scholars. The 1988 book, *The Point of Words*, by Ellen Winner, provides a review of the literature on verbal irony development up to that point, the essential findings being that children fully and correctly comprehend metaphors prior to instances of verbal irony, in part because the initial stage of comprehension,

detection of a difference between sentence and speaker meaning, is more difficult for irony comprehension. Children are thus mostly unable to correctly, fully, and regularly comprehend irony prior to age 6 years. We've included some key papers that have been published since then on irony development.

The first of these papers itself serves as a very nice review of the research conducted to date on the development of cognition with respect to verbal irony. Creusere (2000) first provided this review and dissects developmental irony research into five areas: understanding, contextual influences, theory of mind influences, intonation, and social and communicative functions. The paper then makes a call for the importance of including developmental evaluations of theoretical claims concerning adult irony cognition, both as a means of providing stronger tests of the validity of such claims, as well as to uncover potential illusory beliefs about adult irony cognition (e.g., that adults always comprehend verbal irony correctly). In this spirit, the paper then evaluates whether the two tenets of the allusional pretense theory of discourse irony (Kumon-Nakamura, Glucksberg, & Brown, 1995) are at work in children's comprehension of verbal irony, allusion to violated expectations, and pragmatic insincerity. Fortunately for the allusional pretense theory, both claims were found to hold in children's comprehension of verbal irony, in participants as young as 8 years of age.

A paper by Hancock, Dunham, and Purdy (2000) continued in this vein of testing adult phenomenon on children. This paper evaluated 5- and 6-year-olds' ability to detect the nonliteral nature and intended meaning of ironic criticism and ironic praise. Most previous work had only addressed ironic criticism, and typically found that detection of nonliteralness precedes the ability to correctly infer an ironic speaker's intentions (see Dews & Winner, 1997, for a review). The current study brought ironic praise into the fold and found that the same essential pattern holds, but that it is easier to reject the literal meaning of ironic criticism than ironic praise. Additionally, the study revealed a differential enhancement of correct ironic detection with an echoic variable being introduced—in that children are aided in detecting ironic praise that explicitly echoes an earlier expectation for negativity (e.g., a speaker says, “you sure are a *bad* basketball player” after a player had said he was a bad player, but then played well), but children are not so aided with ironic criticism. Thus, the study confirmed in a developmental paradigm, the general asymmetry of verbal irony found in adults in that ironic criticism is more readily handled than ironic praise.

This study provides an important additional contribution in that it first raises but then diminishes the specter of such an asymmetry arising merely as a byproduct of children's exposure to a greater frequency of ironic criticism than ironic praise—such differential content has been observed in children's television programming (Dews, Winner, Nicolaidis, & Hunt, as cited in Dews & Winner, 1997). The study instead argues that ironic asymmetry is likely due to the differential degree to which ironic criticism and praise allude to preceding events, commonly held expectations, social norms, etc., which tend toward the positive (Kreuz & Glucksberg, 1989; Kumon-Nakamura, Glucksberg, & Brown, 1995; Colston, 2000).

We concur with this position. Were it even true that ironic asymmetry arises entirely or even mostly from pure social learning, the question as to how such a systematic asymmetry got entrenched in the first place is still left begging. The ready alignment of ironic criticism with a widespread, positive, sociocognitive orientation, that is arguably universal except in cases of individuals being under extreme duress, mental illness, etc., and the concomitant lack of such correspondence by ironic praise, seems too compelling for mere coincidence.

The Harris and Pexman (2003) paper further contributed to this growing body of work on the development of ironic comprehension capacities in children, by investigating the development of the social functioning of verbal irony. This paper, in two experiments, made a parallel evaluation of the degree to which children at two stages of development (5–6-year-olds and 7–8-year-olds) can comprehend the meaning of, evaluate the speaker intent behind, and make use of the humorousness inherent in, ironic criticisms and ironic complaints. This study replicated and extended the Hancock, Dunham, and Purdy (2000) paper by revealing the asymmetry of evaluative sophistication of ironic criticism versus praise, as well as demonstrating the operation of the tinge mechanism (Dews, Kaplan, & Winner, 1995) in children's interpretation of both forms of irony. The paper additionally revealed that the humor function of verbal irony, one of the potential contributors to the muting process of verbal irony, is not fully functioning in children at the ages studied.

These studies taken together reveal, at the same time, some of the same patterns observed in adult hearers of verbal irony (asymmetry of ironic criticism/praise, the tinge mechanism, allusion to violated expectations, pragmatic insincerity, etc.), but also a progressive approach toward adult behavior vis-à-vis verbal irony, across developmental stages (accuracy of detection of ironic criticism and praise [especially the latter], detection of the humor function of verbal irony, universal sophistication with different ironic propositional forms, etc.). So clearly, adult-like abilities in comprehending and gleaning the social functions of verbal irony are emerging in relatively young children, but they also undergo a honing process as children develop.

## **SITUATIONAL IRONY**

The last major topic we have included is that of situational irony. Situational irony is a lesser studied cousin of verbal irony, so our selections for this section are accordingly fewer. But a number of important contributions have been made to the rather fledgling field, that have begun to shape our thinking about irony in situations.

The earliest one of these papers that we've included is the Lucariello (1994) paper that was published in the *Journal of Experimental Psychology: General*, a journal specifically designed to appeal to a wide range of scholars and researchers in experimental psychology. This manuscript provided one of the first empirical demonstrations of some of the claims about the concept of situational irony that had been discussed by more historical sources. Most importantly, this study established that the general concept of situational irony is both a structured concept, and is shared and indeed prevalent among people.

The Lucariello (1994) paper first provided a discussion of the characteristics of situational irony, including how it involves unexpectedness, and given this deviation from expected normality, a “mocking” quality in that what occasionally occurs is often in direct contradiction to what is commonly expected by people. That irony also involves “human fragility” in that our expectations/desires are so readily and contradictorily violated, as well as how irony is accordingly common fodder for stories, is also discussed. The difference between situational irony and verbal irony is also briefly treated, followed by the possible internal structure of the concept of situational irony.

In the first “study” of the paper, a wide variety of instances of situational irony, taken from everyday examples, news reports, literary, and other sources is first reviewed and a detailed taxonomy of situational irony types and subtypes is provided. The second and third “studies” then address the primary empirical questions addressed by the study—is there a concept of situational irony, how similar is such a general concept to the taxonomy derived in the first study, and if such a concept exists, what is its internal structure?

Study 2 used a production task where people were asked to produce instances of situational irony that they had encountered directly or indirectly in the past. A great deal of similarity to the taxonomy produced in Study 1 was found, in that each of the subkinds of situational irony identified in Study 1 was produced by people in Study 2.

Study 3 then presented a new group of people with ironic vignettes (half of which were taken from the ironic situations produced in Study 2), along with other events that turned out unexpectedly (but not ironically), and events that turned out as expected. Subjects rated these three event types for their “goodness-as-examples” of ironic situations. The results revealed a concept structure similar to that demonstrated in the previous studies in that the most frequently produced ironic subtypes were rated as the best examples of irony, and the least frequently produced ironic subtypes in Study 2 were rated as least ironic (yet still more ironic than the nonironic unexpected foil items). Characteristics of the prototypically ironic items involved opposition and outcome (the experience of win or loss).

The greatest contribution of the Lucariello (1994) paper is thus its empirical verification of situational irony as a conceptual event type. Akin to scripts, which involve the dimension of expectedness, situational irony is also a schematized shared conceptual structure, but it instead involves unexpectedness and opposition. Situational irony thus captures the quintessential aspects of such events, their unexpectedness, but it also espouses the form that that unexpectedness takes—they’re unexpected in a “culturally recognized way, making [ironic events] purportedly events for which a general knowledge structure is formed.” Lucariello also briefly discussed why situational irony is humorous, and the processing of situationally ironic events.

The other two papers we selected make attempts to formally define what makes a situation and/or utterance ironic. The first of these, Utsumi (2000), offered an Implicit Display theory of verbal irony that specializes in determining the difference between irony and nonirony. The theory has three components. The first is that all

instances of verbal irony involve what is termed an “ironic environment,” in which there is an incongruity between a person’s expectations and reality prior to an ironic remark being made, about which the speaker has a negative feeling. The second component is that such an ironic environment is implicitly displayed by a speaker by an allusion to the violated expectation, typically via pragmatic insincerity, that can reveal the speaker’s negative attitude toward the discrepancy. The third component is that such ironic displays are graded in that there are very strong, obvious instances of ironic implicit display, and other less well-fitting instances. As such, verbal irony can be quantitatively analyzed as better and worse category members, to the end of predicting how ironic an utterance will be perceived as being.

This theory is offered as an extension and improvement upon the other families of theories of verbal irony, which are criticized as either being too broad or narrow to encompass all instances of verbal irony or to distinguish irony from nonirony. To offer just one example of each problem, the Pretense account is argued to be too powerful in that it would include all instances of indirect speech acts. The mention family of theories is also criticized as allowing in nonironic instances such as the example quoted from Giora (1995):

- a. Dina: I missed the last news broadcast. What did the Prime Minister say about the Palestinians?
- b. Mira (with ridiculing aversion): That we should deport them.

This example is considered problematic because it meets the purported conditions of mention with derisive attitude, yet fails to be ironic.

The criticisms of the scope of accounts of verbal irony are not necessarily new. They’ve been part of the reason for the progression of accounts of verbal irony and have also been discussed in various reviews of the irony literature. But the implicit display theory seems to be unique in its contribution of the notion of a prototype category structure for verbal irony. Although this too has received treatments elsewhere in somewhat different forms (see Colston, 2000; Gibbs, 1994), the specificity of the predictions enabled by Implicit Display are quite compelling.

The final paper included in this section is Shelley’s (2001) paper on the bicoherence theory of situational irony. The paper bases this theory of situational irony on bicoherence conceptual relations, between either classes or elements. After first noting how most irony research has focused on topics other than situational irony, and briefly reviewing and critiquing the few treatments of situational irony, a review of the components of the bicoherence theory is offered. The nature of bicoherence, coherence, and incoherence is explained, followed by the basis of the theory on conceptual relations, salience of bicoherence relations, and emotions.

Next a corpus of situational irony cases selected from popular reporting media is thoroughly reviewed to demonstrate how the bicoherence theory provides a taxonomy to classify the cases. A discussion is then provided on how the theory is consistent with a dominant construct from social psychology—causal attribution, followed by sections on how the theory handles change in emotional reaction to sit-

uational irony over time, changes in the conceptual structure of irony, and irony in visual and musical modalities.

The most important contribution of the Shelley paper is arguably the more formalized structure lent to the general notion of contradiction, that many different accounts have struggled to define. The notion of bicoherence relations seems to bring us much closer to encapsulating this quintessential aspect of irony.

## CONCLUSION

This brief review has attempted to highlight the unique contributions of the enclosed articles. This body of work, and the other papers we were unable to include, have made significant progress in our understanding of the comprehension, use, development, and make-up of irony in its various forms. This is a continuing endeavor, with many as-yet unanswered and even unaddressed questions and topics. We thus hope this collection will help inspire present and future scholars to continue this attempt at understanding this unique human phenomenon.

## REFERENCES

- Anolli, L., Ciceri, R., & Infantino, M. (2002). From “blame by praise” to “praise by blame”: Analysis of vocal patterns in ironic communication. *International Journal of Psychology*, 37, 266–276.
- Attardo, S. (2001). Irony as relevant inappropriateness. *Journal of Pragmatics*, 32, 793–826.
- Brown, R. L. (1980). The pragmatics of verbal irony. In R. W. Shuy & A. Shnukal (Eds.), *Language use and the uses of language* (pp. 111–127). Washington, DC: Georgetown University Press.
- Clark, H., & Gerrig, R. (1984). On the pretense theory of irony. *Journal of Experimental Psychology: General*, 113, 121–126.
- Colston, H. (1997). Salting a wound or sugaring a pill: The pragmatic functions of ironic criticism. *Discourse Processes*, 23, 24–53.
- Colston, H. (2000). On necessary conditions for verbal irony comprehension. *Pragmatics and Cognition*, 8, 277–324.
- Colston, H. L. (2002). Contrast and assimilation in verbal irony. *Journal of Pragmatics*, 34, 111–142.
- Colston, H. L. (2005). On sociocultural and nonliteral: A synopsis and a prophesy. In H. Colston & A. Katz (Eds.), *Figurative language comprehension: Social and cultural influences* (pp. 1–18). Mahwah, NJ: Lawrence Erlbaum Associates.
- Colston, H. L., & Gibbs, R. W. (2002). Are irony and metaphor understood differently? *Metaphor and Symbol*, 17, 57–80.
- Colston, H. L., & Katz, A. (2005). *Figurative language comprehension: Social and cultural influences*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Colston, H. L., & O’Brien, J. (2000a). Contrast and pragmatics in figurative language: Anything understatement can do, irony can do better. *Journal of Pragmatics*, 32, 1557–1583.
- Colston, H. L., & O’Brien, J. (2000b). Contrast of kind vs. contrast of magnitude: The pragmatic accomplishments of irony and hyperbole. *Discourse Processes*, 30, 179–199.
- Creusere, M. (2000). A developmental test of theoretical perspectives on the understanding of verbal irony: Children’s recognition of allusion and pragmatic insincerity. *Metaphor and Symbol*, 15, 29–45.