Irony comprehension: A developmental perspective

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Abstract

This paper considers what light experimental work on the development of irony comprehension can shed on the relation between echoic and pretence accounts of irony, and how theoretical debates about the nature of irony might suggest fruitful directions for future developmental research. After surveying the results of developmental studies of three distinctive features of verbal irony – the expression of a characteristic attitude, the normative bias in the uses of irony and the 'ironical tone of voice' – it considers how echoic and pretence accounts of irony might explain these results. On the theoretical side, it argues that echoing and pretence are distinct mechanisms which can be used independently of each other, and that verbal irony necessarily involves echoic use, but does not necessarily involve pretence. On the experimental side, it argues that a range of disparate phenomena including hyperbole, jocularity, understatement and rhetorical questions, which are generally treated as forms of irony in the developmental literature, display none of the distinctive features of irony in most of their uses, and are not inherently ironical. However, these phenomena are worth investigating in their own right, and new theoretical accounts and experimental paradigms are needed to prise them apart.

1. Introduction

Typical examples of verbal irony such as (1) and (2) are widely used not only in literary works but in everyday conversation:

(1)   *Mary (after a chaotic lecture):* That went well.
(2)   *Sue (of a friend who has gossiped behind her back):* You can always count on Jane.

Irony is traditionally described as a matter of saying one thing and meaning the opposite. According to classical rhetoric, metaphor and irony are tropes in which the literal meaning is replaced by a related figurative meaning: in metaphor, this is a related simile or comparison, as in (3)-(4), and in irony, it is the contrary or contradictory of the literal meaning, so that (1)-(2) would convey (5)-(6):

(3)   Sally is a butterfly
(4)   Sally is like a butterfly.
(5)   That didn't go well / That went badly
(6)   You can't always count on Jane / You can never count on Jane

Grice's brief discussion of tropes proposed a modern pragmatic variant of the classical account, in which the 'figurative meanings' in (4)-(6) are reanalysed as implicatures triggered by blatant violation of the first Quality maxim (*Do not say what you believe to be false*) (Grice 1967/1989: 34).

These traditional accounts are based on the assumption that metaphor and irony are cut to the same pattern. To the extent that they have implications for the processing of figurative utterances, they predict that metaphor and irony should be processed on similar lines, show similar developmental patterns and break down in similar ways. Yet a growing body of experimental work casts doubt on these predictions, suggesting that metaphor and irony follow different developmental trajectories, require different orders of metarepresentational ability and break down in different ways. At the same time, serious weaknesses have been found in the traditional accounts of figurative utterances, and alternative models have been proposed.

The most serious weakness of the classical and Gricean accounts is that they do not explain why figurative utterances should exist at all. According to classical rhetoric, metaphor and irony have a decorative value that distinguishes them from their literal counterparts; but it is not explained why, in culture after culture, saying the opposite of what one means should have been found aesthetically pleasing (as opposed to merely irrational) . The standard Gricean account makes no appeal to decorative value, and treats the figurative utterances in (1)-(3) as conveying no more than could have been conveyed by directly asserting (4)-(6). Yet on this account, the interpretation of (1)-(3) necessarily involves rejecting their literal meanings (in Grice's terms, what the speaker has "said or made as if to say") and constructing the appropriate implicatures. It should follow that (1)-(3) are more costly to process than their literal counterparts, but yield no extra benefit, which makes their use irrational and a waste of effort. Moreover, experimental studies suggest that at least some figurative interpretations are no harder to construct than literal interpretations, contrary to the predictions of this 'literal-first' model (Gibbs, 1986, 1994; Dews and Winner 1999; Schwoebel et al., 2000; Giora, 2003; Glucksberg, 2001).

Most post-Gricean theories of irony can be seen as either variants of, or reactions to, the echoic theory first proposed by Sperber and Wilson (1981) (and developed in a series of later works e.g. Sperber and Wilson, 1995, 1998, 2012; Wilson and Sperber, 1992). According to the echoic account, the speaker of an ironical utterance such as (1) or (2) is not saying the opposite of what she means, but *echoing* a thought (e.g. a belief, an intention, a norm-based expectation) she attributes to an individual, a group, or to people in general, and expressing a mocking, scornful or contemptuous attitude to this thought. Thus, when Mary in (1) says, after a chaotic lecture, *That went well*, she is neither asserting literally that the lecture went well nor asserting 'ironically' that the lecture want badly, but expressing a mocking, scornful or contemptuous attitude towards (say) her own hopes or expectations that the lecture would

go well. This approach was experimentally tested by Jorgensen, Miller and Sperber (1984), which proposed a new paradigm for experimental research on irony.

Under the direct or indirect influence of these two papers, much current work on irony rejects both the traditional description of irony and the classical and Gricean accounts that underlie it. What the speaker of (1) or (2) is taken to communicate is neither the proposition expressed by the ironical utterance nor the opposite of that proposition, but an attitude to this proposition and to those who have held or might hold it. For instance, Kreuz and Glucksberg (1989) propose an 'echoic reminder' theory on which the point of an ironical utterance is to *remind* the hearer of the thought it echoes (according to Wilson and Sperber 2012, this is indeed quite often, though not invariably, the case). By far the most influential variation of Sperber and Wilson's account, and also the most critical one, is the pretence theory proposed as an alternative to the echoic account in a pioneering paper by Clark and Gerrig (1984) and extended in Kumon-Nakamura, Glucksberg and Brown's (1995) 'allusional pretence' account. According to pretence theories, the speaker of an ironical utterance is not seriously performing a speech act such as making an assertion or asking a question, but merely pretending to perform one, while expecting her audience to see through the pretence and detect the mocking or contemptuous attitude behind it. Thus, Mary in (1) is merely pretending to assert that the lecture went well, while expressing her own scornful attitude to the speech act itself, and to anyone who would perform it or take it seriously.

Some of the implications of the echoic and pretence accounts have been tested in studies of irony comprehension in adults (Jorgensen, Miller and Sperber, 1984; Gibbs, 1986, 1994; Kreuz and Glucksberg, 1989; Kumon-Nakamura, Glucksberg and Brown, 1995; McDonald, 2000; Giora, 2003). On the developmental side, however, with a few notable exceptions, the links between theories and experimental work have been rather less direct. As Marlena Creusere (1999: 256-7) puts it,

> While many of the studies related to children's understanding of irony may be consistent with and possibly influenced by theories of adults' understanding of verbal irony, few developmental investigations have specifically tested the claims made within these perspectives.)

She goes on to comment,

> Just as consideration of theories concerning adults' use and processing of irony and sarcasm is likely to inform researchers interested in pragmatic language development, attention to the results of developmental studies of non-literal speech-act comprehension is certain to enlighten those interested in pragmatic theory (Creusere 1999: 258).

My aim in this paper is to consider what light the growing literature on the development of irony comprehension can shed on the relation between echoic and pretence accounts, and

how theoretical debates on the nature of irony might point out fruitful directions for future developmental research.

The paper is organised as follows. In section 2, I look at three distinctive features of verbal irony which are puzzling from the perspective of the classical and Gricean accounts and consider what can be learned about them from the developmental literature. In sections 3 and 4, I outline the echoic and pretence accounts of irony and consider what light they shed on the features of irony discussed in section 2. In section 5, I draw some practical and theoretical conclusions and point out some possible directions for future research.

On the theoretical side, the echoic and pretence accounts have much in common. Both reject the classical and Gricean accounts of irony, both offer a rationale for irony, and both take ironical utterances such as (1)-(2) as crucially involving the expression of a characteristic (mocking, scornful or contemptuous) attitude. Partly for this reason, the two accounts are sometimes seen as empirically or theoretically indistinguishable: several hybrid versions containing elements of both have been produced, and the boundaries between them have become increasingly blurred. I will argue that the two theories are not equivalent: echoing and pretence are distinct mechanisms which can operate independently of each other (although they may occasionally combine), and it is the echoic mechanism, not the pretence mechanism, that explains the distinctive features of irony.

On the experimental side, one consequence of the move away from the traditional description of verbal irony as saying one thing and meaning the opposite has been a considerable broadening in the range of phenomena seen as falling within the scope of a theory of irony. Classic treatments of irony such as Booth (1984) or Muecke (1969) implicitly acknowledge that the traditional description is too narrow by including in their discussions not only regular declaratives such as (1)-(2), but also interrogatives and imperatives such as (7)-(8) and hyperboles such as (9), which can indeed be used to express the characteristic ironical attitude without saying the opposite of what they mean:

(7)   *(to an obsessively cautious driver):* Did you remember to check the rear-view mirror?
(8)   *(to someone who has dropped a plate of food):* Go ahead and ruin my carpet.
(9)   *(after a boring lecture):* I was on the edge of my seat.

In the recent experimental literature, the notion of irony has been broadened still further, and is now often taken to include rhetorical questions such as (10), hyperboles such as (11) and various forms of teasing or banter such as (12), which would not be traditionally regarded as ironical at all:

(10)   (*to a child throwing toys around*): How many times do I have to tell you to stop?
(11)   (*of a big sandwich*): This is the biggest sandwich in the world.
(12)   (*to a close friend coming into the room*): Here comes trouble!

Having rejected the traditional description of irony, how can we decide whether such broadenings are legitimate or not?

Throughout its history, the term 'irony' has been applied to a very wide range of loosely related phenomena, not all of which fall squarely within the domain of pragmatics defined as a theory of overt communication and comprehension (e.g., situational irony, dramatic irony, Romantic irony and irony of fate do not). Of those that are properly pragmatic, some are clearly forms of echoic use, others indeed involve pretence, while still others have no more in common with (1)–(2) than the presence of a mocking attitude or the evocation of a discrepancy between representation and reality. It should not be taken for granted that all these phenomena work in the same way, or that our goal in constructing a theory of irony should be to capture the very broad and vague extension of the common meaning of the term. The goal of a theory is to identify *mechanisms* and see what range of phenomena they explain. I will argue that the distinctive features of irony discussed in the next section are the key to the mechanism for irony comprehension, that many of the phenomena currently grouped together in the developmental literature as "various forms of irony" exploit different mechanisms, and that new theoretical accounts and experimental paradigms are needed to prise them apart.

2. Distinctive features of irony

Irony has three distinctive features which have often been remarked on in the history of rhetoric, but which are puzzling from the classical and Gricean points of view. All three have been investigated in the developmental literature and found to be present quite early. An adequate theory of irony should explain why this is so.

A. *The role of attitude in irony*
After briefly introducing his account of figurative utterances, Grice discusses a possible counterexample to his treatment of irony:

> A and B are walking down the street, and they both see a car with a shattered window. B says, *Look, that car has all its windows intact.* A is baffled. B says, *You didn't catch on; I was in an ironical way drawing your attention to the broken window.* (Grice, 1967/1989: 53)

This example meets all Grice's conditions on irony – the speaker "says or makes as if to say" something blatantly false, intending to implicate the opposite – but the result would not normally be seen as ironical. Grice suggests that what is missing from his account may be the fact that irony involves the expression of a "hostile or derogatory judgment or a feeling such as indignation or contempt" (Grice, 1967/1989: 53). Neither the role of attitude in irony nor the fact that irony has a characteristic attitude while metaphor does not has a straightforward explanation in the Gricean framework, where metaphor and irony are both treated as blatant

violations of the first Quality maxim, designed to convey a related implicature. Why should one type of violation involve the expression of a characteristic attitude and the other not?

In the developmental literature, the role of attitude in irony has been approached in two ways. Verbal irony (and sarcasm in particular) often has a specific 'target' or 'victim': the person who is the object of the speaker's "hostile or derogatory judgement" or "feeling such as indignation or contempt". One way of testing children's ability to recognise this attitude is to ask them how "nice" or "mean" the speaker is being. In a study by Dews et al. (1996), for instance, 5-6 year olds, 8-9 year olds and adults saw cartoon clips showing scenarios such as the following, ending in remarks interpretable as literal criticisms, literal compliments or ironic criticisms:

> **Teenage Mutant Ninja Turtles**
> The turtles try to get a computer expert to show them how he did something on a computer. The computer expert just walks away. One turtle remarks, "Helpful, isn't he?"

Participants who passed a comprehension question (e.g. "Did the turtle mean that the man was *helpful and nice,* or *selfish and not co-operating?"*) then indicated how mean they thought speaker was by circling one of four faces representing different degrees of meanness: *very very mean*, *very mean*, *a teeny bit mean*, and *not mean at all*. In all three groups, ironic criticisms were ranked as meaner than literal compliments but less mean than literal criticisms, with the difference between literal compliments and ironic criticisms increasing with age (this is sometimes known as the 'muting' function of irony; see Colston, 1997; Glenwright and Pexman, 2003; Filippova and Astington, 2010)

However, eliciting judgements about whether the speaker is being nice or mean is a rather blunt tool for tracking the child's ability to recognise the mocking, scornful or contemptuous attitude characteristic of irony. Although all ironical utterances express such an attitude, only some have a definite target or victim and are therefore likely to be perceived as hurtful or mean. Consider (13), said in a downpour – a typical case of verbal irony:

(13)   It's lovely weather.

If someone other than the speaker has wrongly predicted good weather, (13) would have a definite target or victim – the person who made the prediction and anyone who took it seriously – and the utterance might well be perceived as mean. On many occasions of utterance, though, the speaker would merely be commenting ironically on the general frailty of human hopes: in that case, (13) would have no definite target or victim, and the remark would not be appropriately described as hurtful or mean. But whether or not there is a definite target or victim, (13) still expresses the characteristic ironical attitude, which is directed not at a person but at a thought.

A second line of research takes seriously the idea that irony involves a 'thought about a thought', and should therefore require a higher order of mindreading ability than metaphor. In a classic paper, Francesca Happé (1993) tested metaphor and irony comprehension in typically developing children and young people with autism, using stories such as the following:

> David is helping his mother make a cake. She leaves him to add the eggs to the flour and sugar. But silly David doesn't break the eggs first – he just puts them in the bowl, shells and all. What a silly thing to do! When mother comes back and sees what David has done, she says:
>   "Your head is made out of wood!"
> Q1: *What does David's mother mean? Does she mean that David is clever or silly?*
> Just then father comes in. He sees what David has done and he says:
>   "What a clever boy you are, David!"
> Q2: *What does David's father mean? Does he mean David is clever, or silly?*

The stories were interrupted at two points with comprehension questions: Question 1 tests the comprehension of metaphor and Question 2 tests the comprehension of irony. Participants also took standard first- and second-order false-belief tasks, which are generally seen as revealing orders of 'mindreading' ability, and a significant correlation emerged: participants who passed no false-belief tests understood neither metaphorical nor ironical utterances; those who passed only first-order false belief tests understood some metaphorical but no ironical utterances, and those who passed both first-order and second-order false-belief tests understood both metaphorical and ironical utterances. On the assumption that standard false-belief tasks test orders of mindreading ability, it should follow that irony requires a higher order of mindreading ability than metaphor, thus confirming the prediction that irony involves a 'thought about a thought'.[1] This fits with the consensus in the developmental literature that irony comprehension develops considerably later than metaphor comprehension – typically, between the ages of five and six, when the ability to pass standard second-order false belief tasks has just emerged (Winner, 1988; Capelli et al., 1990; Creusere, 1999, 2000; Keenan and Quigley, 1999; Nakassis and Snedeker, 2002; Pexman and Glenwright, 2007).

B. *The normative bias in irony*
There is a widely noted normative bias in the uses of irony which is puzzling from the perspective of the classical or Gricean accounts. The most common use of irony is to criticise or complain when a situation, event or performance does not live up to some norm-based

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[1] While the correlation Happé found between irony comprehension and success in second-order false-belief tests has proved fairly robust, the correlation between metaphor comprehension and success in first-order false belief tests has proved rather less robust: some metaphors are understood by people who do not pass standard false-belief tests at all (Langdon, Davies and Coltheart, 2002; Norbury, 2005).

expectation (lectures are *supposed* to go smoothly; friends *ought not* to gossip behind our backs). Only in special circumstances can irony be used to praise or reassure, or to point out that some proposition lacking in normative content is false. So when someone cheats, it is always possible to say ironically, *What an honest man*, but when someone behaves honestly, the circumstances in which one can say ironically, *What a cheat* are very limited: such negative ironical comments are only appropriate when some doubt about the honesty of the person in question has been entertained or expressed. The classical and Gricean accounts suggest no explanation for this asymmetry between positive and negative forms of irony.

The presence of a normative bias in irony comprehension in adults was experimentally confirmed by Kreuz and Glucksberg (1989) using alternative versions of stories such as the following, with the italicised sentence either present or absent:

> Nancy and her friend Jane were planning a trip to the beach.
> *"It's probably going to rain tomorrow", said Jane, who worked for a local TV station as a meteorologist.*
> The next day was a warm and sunny one.
> As she looked out of the window, Nancy said, "This certainly is awful weather."

The results showed that participants were more likely to judge the ironical comment appropriate when it was preceded by the explicit prediction that the weather would be bad. By contrast, in positive versions such as the one below, the ironical comment was judged equally appropriate whether or not the italicised sentence was present:

> Nancy and her friend Jane were planning a trip to the beach.
> *"The weather should be nice tomorrow", said Jane, who worked for a local TV station as a meteorologist.*
> The next day was a cold and stormy one.
> As she looked out of the window, Nancy said, "This certainly is beautiful weather."

Interestingly, this normative bias has been shown to be present from the outset, in children as young as 5 or 6. Hancock, Dunham and Purdy (2000) tested 5-6-year olds on their comprehension of 'ironic criticisms' and 'ironic compliments', using videotaped stories showing exchanges such as the following, containing one or other of the italicised words:

> **Weight-Lifter Story (critical version)**
> **A:** I'm [*good/bad*] at lifting weights. [A fails to lift weight]
> B: You really are good at lifting weights. [Ironic criticism]
>
> **Weight-Lifter Story (complimentary version)**
> **A:** I'm [*good/bad*] at lifting weights. [A lifts weight]
> B: You really are bad at lifting weights. [Ironic compliment]

Here, the ironic criticism *You really are good at lifting weights*, said to someone who has failed, was understood equally well whether it was preceded by a boastful remark (*I'm good at lifting weights*) or a self-critical one (*I'm bad at lifting weights*). By contrast, the 'ironic compliment' *You really are bad at lifting weights* was understood significantly more often when preceded by the self-critical remark *I'm bad at lifting weights* (which it could be seen as ironically echoing) than by the boastful remark *I'm good at lifting weights* (see also Dews et al., 1996; Creusere, 2000; Glenwright & Pexman, 2003; Pexman et al., 2005; Astington and Filippova 2010.)

C. The ironical tone of voice
A further difference between irony and metaphor which is not explained by the classical or Gricean accounts is that irony, but not metaphor, has a characteristic tone of voice. This is characterised by a flat or deadpan intonation, slower tempo, lower pitch level and greater intensity than are found in the corresponding literal utterances (Ackerman, 1983; Rockwell, 2000; Bryant and Fox-Tree, 2005; Bryant, 2010), and is generally seen as an optional cue to the speaker's mocking, scornful or contemptuous attitude. Thus, Rockwell (2000: 485) treats the vocal cues to sarcasm – a subtype of irony which she defines as "a sharply mocking or contemptuous ironic remark intended to wound another" – as closely related to those for contempt or disgust, and suggests that they may be the prosodic counterparts of facial expressions such as "a sneer, rolling eyes, or deadpan expression." Since not all vocal or facial expressions of mockery, contempt or disgust are perceived as ironical, the challenge for theories of irony is explain what makes some such expressions of attitude ironical, while others are not.

There has been some debate in the developmental literature about how far the ironical tone of voice contributes to children's irony comprehension, but several studies suggest that it can play a significant facilitating role. For instance, Keenan and Quigley (1999) tested irony comprehension in 6-, 8- and 10-year olds using stories such as the following, containing one or other of the italicised sentences:

> **Red shoes story**
> One night, Lucy was going to a party. Lucy was all dressed up in her new party dress, ready to go, but she didn't have her party shoes on. Lucy didn't want to run upstairs with her nice dress on, so she called to her brother Linus who was upstairs reading. She yelled, "Linus, please bring me my nice red party shoes! [*I want to look pretty for the party /I have to hurry or I'll be late*]." So Linus, who was still reading his book, went to Lucy's closet and by mistake, he picked up Lucy's dirty old running shoes. When he went downstairs to hand them to Lucy, she looked at them and said, "Oh great. Now I'll really look pretty."

Half the children in each age group were assigned to a 'vocal intonation' condition in which Lucy's final utterance was delivered in a sarcastic tone of voice, while the other half heard the same utterance with neutral intonation. The results showed that sarcastic intonation

significantly increased irony comprehension across all three age groups, and in both versions of the story. In the neutral intonation condition, by contrast, the children performed significantly better when Lucy's final utterance was preceded by the comment *I want to look pretty for the party* (which it could be understood as echoing) than by the unrelated comment *I have to hurry or I'll be late* (see also Milosky and Ford, 1997; Nakassis and Snedeker, 2002; Laval and Bert-Erboul, 2005).

As an interesting sidelight, it is sometimes noted in the experimental literature that the speaker of an ironical utterance can optionally use not just the regular 'ironical tone of voice' but another perceptibly different tone of voice. Laval and Bert-Erboul (2005: 612) comment:

> Several types of intonation can be used to express sarcasm…: A person may use a monotonic intonation (e.g., saying "won-der-ful" in an exaggerated monotone to reply to an addressee who tells you about a mandatory meeting at 8.00 p.m. when you have a tennis match scheduled) or an intonation that conveys excessive enthusiasm (e.g., using an overly enthusiastic tone of voice to say, "Hey, you should drive faster!" to a person who is going 60 miles an hour when the speed limit is 30).

Here, the first, "monotonic" type of intonation is the one traditionally described as the ironical tone of voice. The challenge for theories of irony is to explain why ironical utterances can be produced not only in this tone of voice but also a second, "overly enthusiastic" one.

In the next two sections, I will outline the echoic and pretence accounts of irony and consider what light they shed on the distinctive features of irony discussed in this section. My main claim will be that the echoic account straightforwardly explains all these features, whereas non-echoic versions of the pretence account do not explain them at all; while hybrid echoic-pretence accounts can borrow the explanation offered by the echoic account, they do not add anything to it and would work just as well without the appeal to pretence.

3. How the echoic account explains the distinctive features of irony

Echoic use is a technical term in relevance theory (Sperber and Wilson 1995: chapter 4, sections 7-10; Wilson, 2006; Wilson and Sperber, 2012). The easiest way to present it is to contrast it with tacit reports of speech and thought such as (14)-(15):

(14)   The President spoke up. *The country was in crisis*.
(15)   The voters were thoughtful. *If they didn't act now, it might be too late*.

How are the italicised sentences in (14)-(15) to be understood? A plausible interpretation of (14) (though not the only one) is that the speaker is not herself claiming that the country was in crisis, but tacitly attributing such a claim to the President. Similarly, a plausible interpretation of (15) is that the speaker is tacitly attributing to the students the thought that if

they didn't act now, it might be too late. The main point of such tacit reports of speech or thought is to inform the audience about the content of an attributed utterance or thought.

Now consider the italicised sentences in (17a)-(17c), three possible responses by Sue to Jack's announcement in (16) that he has finished a paper he's been working on all year:

(16)   *Jack:*   I've finally finished my paper.

(17)   a.   *Sue (happily): You've finished your paper*! Let's celebrate!
       b.   *Sue (cautiously): You've finished your paper*. Really completely finished?
       c.   *Sue (dismissively): You've finished your paper*. How often have I heard you say that?

It is easy to see that the italicised sentences in (17a)-(17c) have a different function from those in (14)-(15): Sue is not intending to inform Jack about the content of a thought he has only just expressed, but to show him that she is thinking about it and to convey her own attitude or reaction to it. In (17a), she indicates that she accepts it as true and is thinking about its consequences; in (17b), she reserves judgement about it, and in (17c), she indicates that she does not believe it at all. According to Sperber and Wilson, these are *echoic* uses of language, whose main function is not to inform the audience about the content of an attributed thought, but to show that the speaker has that thought in mind and wants to convey her own attitude or reaction to it.

The attitudes that can be conveyed in an echoic utterance range from acceptance and endorsement of the attributed thought, as in (17a), through various shades of doubt or scepticism, as in (17b), to outright rejection, as in (17c). According to the echoic account, what distinguishes verbal irony from other types of echoic use is that the attitude conveyed is drawn from the *dissociative* range: the speaker rejects a tacitly attributed thought as ludicrously false (or blatantly inadequate in other ways). Thus, (17c) is a typical case of verbal irony.

The central claims of the echoic account may be summed up as follows. The point of an ironical utterance is to express the speaker's own dissociative (e.g. mocking, scornful or contemptuous) attitude to a thought similar in content to the one expressed in her utterance, which she attributes to some source other than herself at the current time. The thought being echoed need not have been overtly expressed in an utterance: it may be an unexpressed belief, hope, wish or norm-based expectation (e.g. that a certain lecture will run as it should, a certain friend will behave as she should, and so on). The source of the thought may be a specific person, a type of person, or people in general; and it is only when the source is a specific person or type of person that the irony will have a definite target or victim. Finally, the proposition expressed by the ironical utterance need not be identical in content to the thought being echoed: it may be a paraphrase or summary of the original, may pick out one of its implications, or may be a caricature or exaggeration used to cue the audience to the

speaker's mocking, sceptical or contemptuous attitude (on the use of hyperbole as a cue to irony, see Kreuz and Roberts, 1995).

Here is how this account explains the distinctive features of irony discussed in section 2.

The role of attitude in irony
The echoic account straightforwardly explains why irony expresses a characteristic attitude while metaphor does not. According to the echoic account, the main point of irony is to express the speaker's mocking, scornful or contemptuous attitude to an echoed thought. Within this framework, the ironical attitude is not a puzzling feature added to a specific kind of trope: it is constitutive of irony. This account also helps to explain why some ironical utterances are mean or hurtful while others are not. Although the ironical attitude is directly targeted at attributed thoughts, it may be indirectly targeted (particularly in sarcasm) at specific people, or types of people, who entertain such thoughts or take them seriously, and in those cases it may be perceived as hurtful or mean. Dissociative attitudes themselves vary quite widely, falling anywhere on a spectrum from amused tolerance through various shades of resignation or disappointment to contempt, disgust, outrage or scorn. The more specific the target, and the more aggressive the attitude, the more likely the utterance is to be judged as hurtful or mean.

The echoic account predicts that in Grice's scenario of the car with a broken window, what would make the utterance *Look, that car has all its windows intact* a genuine case of irony is some evidence that it is being echoically used to dissociate the speaker from an attributed thought. In the absence of such a thought, there is nothing that the speaker can be seen as ironically echoing, and hence no irony. However, add to the scenario the assumption that as we walk down the street, I have been worrying aloud about whether it is safe to leave my car there overnight and you have been trying to reassure me. At that point, we come across a car with a broken window. Then my utterance, *Look, that car has all its windows intact* could be seen as ironically echoing your assurances in order to show how ill-founded they have turned out to be. No irony without an ironical attitude, no ironical attitude without echoing of an attributed thought.

Happé's (1993) paper on metaphor and irony comprehension was designed to test the prediction of the echoic account that irony expresses a thought about a thought whereas metaphor expresses a thought about a state of affairs in the world. In interpreting her results, Happé relied on the assumption that different orders of false-belief task are linked to different orders of mindreading ability, from which it would follow directly that irony involves a higher order of mindreading ability than metaphor. Recent work with non-verbal versions of the false-belief task has shown that in fact, infants are already able to attribute false beliefs long before typically developing children pass standard first-order verbal false-belief tests (generally, around the age of four) (Onishi and Baillargeon, 2005; Surian, Caldi and Sperber, 2007; Southgate, Chevallier and Csibra, 2010). This suggests that standard false-belief tasks do not provide adequate evidence on the developmental origins of the mindreading ability. Still,

success in different orders of false-belief task clearly requires different orders of mindreading ability: first-order tasks require the ability to attribute thoughts about states of affairs in the world, whereas second-order tasks require the ability to attribute thoughts about thoughts. So Happé's results do confirm the predictions of the echoic account.

The normative bias in irony
The fact that irony is generally used to criticise or complain was described and discussed at length in classical rhetoric, but never properly explained. The echoic account provides a simple and convincing explanation. Norms are socially shared ideas about how things should be. We are all aware that people should be polite, helpful, stylish, trustworthy, lectures should run smoothly, actions should achieve their goal, the weather should be good, and so on. So when a particular event or action fails to live up to the norm, it is always possible to say ironically *That was helpful*, *How clever*, *Well done*, *Lovely weather* and so on, and be understood as echoing a norm-based expectation that should have been met.

By contrast, it is not always possible to say ironically, *What a cheat* when someone is behaving honestly, *How clumsy* when someone is being graceful, *Awful weather* when the sun is shining, and so on. For irony to succeed in these cases, there must have been some manifest doubt or suspicion that the person in question might be dishonest or clumsy, the weather would be awful, and so on. Otherwise there will be no identifiable thought that the speaker can be understood as ironically echoing.[2] The echoic account predicts that this normative bias is inherent to irony and should therefore be present from the outset, as Hancock, Dunham and Purdy (2000) have shown.

The ironical tone of voice
The echoic account straightforwardly accounts for the 'ironical tone of voice' described in the literature and explains why there is no corresponding metaphorical tone of voice. As noted above, the ironical tone of voice is an optional cue to the particular type of dissociative attitude – amused, tolerant, bitter, vicious – that the speaker intends to convey. Since metaphor is not echoic and does not involve the expression of a characteristic attitude, there is no reason why we should expect to find a corresponding metaphorical tone of voice. (On the second, "over-enthusiastic", tone of voice discussed by Laval and Bert-Erboul 2005,, see section 4.)

This account also sheds some light on the results obtained in Keenan and Quigley's 'Red Shoes Story' described in section 2. The results showed that children in the 'neutral

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[2] Incidentally, the echoic account predicts that negative ironical utterances such as *What a cheat*, or *How clumsy*, which are described in the experimental literature as "ironic compliments", are not simply used to praise. Like all ironical utterances, they express a characteristic mocking, scornful or contemptuous attitude, and may well have as a target or victim whoever expressed the doubts that turned out to be false (Garmendia 2011). This may shed some light on the mixed results obtained by asking whether the speaker in such cases is being 'nice' or 'mean'.

intonation' condition – with no sarcastic tone of voice – understood Lucy's utterance *Now I'll really look pretty* as ironical significantly more often when it was preceded by the related comment *I want to look pretty for the party* than by the unrelated comment *I have to hurry or I'll be late.* By contrast, those in the 'vocal intonation condition' – involving a sarcastic tone of voice – performed equally well with both versions. These results can be explained on the assumption that the use of sarcastic intonation and the presence of an earlier related comment which Lucy might be seen as echoing are (optional) cues to irony, so that when neither cue is present, the irony is more likely to be missed.

4. How the pretence account explains the distinctive features of irony

The central claim of most current pretence accounts of irony is that the speaker of an ironical utterance is not herself performing a speech act (e.g. making an assertion or asking a question) but pretending to perform one, in order to express a mocking, scornful or contemptuous attitude to the speech act itself, and to anyone who would perform it or take it seriously. Clark and Gerrig's (1984) pretence theory, put forward as an alternative to the echoic account in a response to Jorgensen, Miller and Sperber (1984), was the inspiration for later pretence accounts such as Kumon-Nakamura, Glucksberg and Brown (1995), Recanati (2004, 2007) and Currie (2006, 2008).

Jorgensen et al. had treated the remark *See what lovely weather it is* in (18) as an ironical echo of a prediction in the weather forecast:

(18)   Trust the Weather Bureau! See what lovely weather it is: rain, rain, rain.

Clark and Gerrig (1984: 122) treat it as a type of pretence:

> With *See what lovely weather it is*, the speaker is pretending to be an unseeing person, perhaps a weather forecaster, exclaiming to an unknowing audience how beautiful the weather is. She intends the addressee to see through the pretence – in such rain she obviously could not be making the exclamation on her own behalf – and to see that she is thereby ridiculing the sort of person who would make such an exclamation (e.g. the weather forecaster), the sort of person who would accept it, and the exclamation itself.

According to this account, understanding irony involves the ability to recognise that the speaker is pretending to perform a speech act and simultaneously expressing a certain type of (mocking, scornful or contemptuous) attitude to the speech act itself and to anyone who would take it seriously.

As it stands, however, this version of the pretence account does not solve the problem raised by Grice's counterexample, where the speaker points to a car with a broken window and says, *Look, that car has all its windows intact.* Even if we add to Grice's scenario the assumption that the speaker is expressing a mocking, scornful or contemptuous attitude to the speech act

itself and to anyone who would perform it or take it seriously, the problem does not go away. After all, someone who seriously asserted that a car with an obviously broken window had all its windows intact would be no less worthy of ridicule or contempt than someone who seriously asserted that the weather is lovely when it's pouring with rain. So why does the irony fall flat in one case and not in the other?

According to the echoic account, what is missing from simpler versions of the pretence account is the assumption that for irony to succeed, the object of the ironical attitude must be a thought that the speaker is tacitly *attributing* to some actual person or type of person (or to people in general). Unless the pretence account is extended to include the assumption that irony is tacitly echoic or attributive, it is hard to see how it can handle either Grice's counterexample or a wide range of examples constructed on a similar pattern, involving assertions which would be ridiculous if used in the circumstances, but which no-one has seriously made or even contemplated.

In fact, the general idea behind the echoic account – that irony is necessarily echoic or attributive – has been quite widely accepted, although particular aspects of it have been criticised (and occasionally misconstrued). Several pretence theorists share the intuition that irony is tacitly attributive, but also maintain that irony involves the simulation or imitation of a (real or imagined) speech act, and is therefore a case of pretence. Hybrid echoic-pretence accounts differ from simpler versions of the pretence account by claiming that irony is necessarily attributive, and from the echoic account by claiming that irony also necessarily involves pretence.

Perhaps the best known attributive-pretence account of irony, and also the one most widely used in the experimental literature, is Kumon-Nakamura, Glucksberg and Brown's (1995: 61) 'allusional pretence' account, which involves elements of both attribution and pretence. The attributive element is introduced through the requirement that an ironical utterance must "allude to some prior expectation, norm or convention that has been violated in one way or another". The pretence element is added to deal with a variety of cases which Kumon-Nakamura et al. see as allusive but not properly echoic in Sperber and Wilson's sense. These include ironical assertions such as (19), questions such as (20), offers such as (21) and requests such as (22):

(19)   *(to someone arrogantly showing off their knowledge):* You sure know a lot.
(20)   *(to someone acting inappropriately for their age):* How old did you say you were?
(21)   *(to someone who has just gobbled the whole pie):* How about another small slice of pizza?
(22)   *(to an inconsiderate and slovenly housemate):* Would you mind very much if I asked you to consider cleaning up your room some time this year?

For Kumon-Nakamura et al., a crucial feature of these utterances is their *pragmatic insincerity*: the speaker 'makes as if' to perform a certain speech act while intentionally

violating one of its sincerity conditions (for instance, the condition on questions that the speaker should want to know the answer, or on offers that the offer is being made in good faith). While acknowledging that (19) might be seen as echoing the arrogant person's conception of himself, Kumon-Nakamura et al. claim that no such treatment is possible for the non-declaratives in (20)–(22).[3]

A crucial question raised by hybrid attributive-pretence accounts is: what is the relation between echoic/attributive use and pretence? Are echoing and pretence two distinct mechanisms which can be used independently of each other, or is there only a single mechanism, because echoic/attributive use is a subvariety of pretence? A hypothesis underlying at least some attributive-pretence accounts seems to be that the only way to echo or tacitly report an utterance is by imitating or mimicking it, so that echoic/attributive use is indeed a subvariety of pretence. On this approach, not only all ironical utterances but also tacit reports of speech and thought such as (14)-(15) above necessarily involve pretence. According to Recanati (2007: 223-227), for instance, both irony and free indirect speech are tacitly attributive varieties of mimicry or pretence:

> The act of assertion is precisely what the speaker does not perform when she says that p ironically: rather, she plays someone else's part and mimics an act of assertion accomplished by that person.

If this hypothesis were correct, it would simultaneously confirm the hybrid attributive-pretence account of irony and explain the parallels between irony and tacit reports of speech and thought.

To illustrate, suppose the weather forecaster makes the assertion in (23):

(23)   *Weather forecaster:* It will be lovely weather today.

Then Mary might imitate this speech act in order to report it, as in (24), or to express her own mocking, sceptical or critical attitude to it, as in (25):

(24)   *Mary*: Guess what I've just heard. *The weather is going to be lovely today.*
(25)   *Mary* [*in the pouring rain*]: The weather is really lovely today.

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[3] In fact, Sperber and Wilson see the echoic account as applying straightforwardly to non-declaratives, including ironical questions and imperatives such as (7)-(9) above (discussed in Sperber and Wilson (1981; 1995). They analyse over-polite requests such as (21) as ironical echoes of the sort of deferential utterance that (it is implied) the hearer sees as his due (Sperber and Wilson, 1981: 311-312). Sarcastic offers such as (20) might be seen as ironically echoing the sort of utterance a good host is expected to produce, or that a guest who thinks his greed has not been noticed might be expecting to hear; and so on.

This version of the pretence account seems not only to explain the attributive nature of (24) and (25) without any appeal to an independent echoic/attributive mechanism, but also to capture the intuition that the object of the ironical attitude conveyed in (25) is the speech act the weather forecaster performed. It thus appears to offer a genuine alternative to the echoic account.

However, there are several problems with the idea that all cases of echoic/attribibutive use can be explained by a single (pretence) mechanism. In the first place – as most pretence theorists recognise – the object of the ironical attitude need not be a speech act, but may be simply a thought that has not been overtly expressed in an utterance. While it makes sense to talk of mimicking, imitating or pretending to perform a public speech act, it makes no clear sense to talk of mimicking, imitating or pretending to perform a private thought. Pretence accounts of tacit reports of thought run into a similar problem. Recanati (2007) suggests that these might be handled by broadening the notion of assertion to cover both public speech acts and private judgements, so that a speaker who reports either can be described as mimicking an "act of assertion". But this is a purely terminological proposal, and does not solve the problem of how a piece of public behaviour can mimic a private thought. By contrast, the notion of echoic attributive use, which is based on resemblances in content rather than in behaviour, and which therefore need not involve pretence or imitation, applies straightforwardly to any representation with a conceptual content, whether this is a public representation that can indeed be imitated or a mental representation that cannot.

A second problem with the hypothesis that ironical utterances are imitations of actual (or plausibly attributable) speech acts is that even when there is an actual prior speech act that the ironical speaker may be seen as echoing, her utterance need not preserve the illocutionary force of the original. For instance, Mary might ironically echo the weather forecaster's assertion in (23) by saying to her companion,

(26)   a.   Isn't it lovely weather?
       b.   What lovely weather we're having today!
       c.   Let's enjoy this lovely weather.

These utterances resemble (23) in propositional content, but not in illocutionary force, and it is hard to see how Mary could be seen as *imitating* the speech act that the weather forecaster performed; if she is pretending to perform any speech act in (26a), it is a question rather than an assertion. Or recall the 'Red shoes story' in section 2 above, where Lucy asks Linus to bring her nice red party shoes. According to the pretence account, when Lucy says ironically *Now I'll really look pretty*, she is pretending to assert that she will really look pretty. However, the actual utterance that she is ironically echoing was *I want to look pretty for the party*, and this expresses a desire or wish, rather than a belief or assertion, that she will look pretty tonight. The point is quite general, and shows that even when the object of the speaker's ironical attitude is an actual speech act (e.g. the weather forecaster's assertion in (23)), this speech act cannot be identified with the one the speaker is pretending to perform.

Finally, it is hard to see how echoic endorsements or echoic questions can be treated as cases of pretence. Recall (17a) (*You've finished your paper. Let's celebrate*), where Sue echoes and endorses Jack's claim that he has finally finished his paper. This is not a 'pragmatically insincere' speech act in the sense of Kumon-Nakamura et al. (1995): by expressing an endorsing attitude to the thought she is echoing, Sue is indirectly committing herself to its truth, and all the felicity conditions on assertion are met. Or consider an echoic question parallel to (17b) (*You've finished your paper. Really, completely finished*?):

(17)'   b.'   You've finished your paper? Really, completely finished?

Here, Sue simultaneously echoes Jack's assertion and performs a genuine speech act of her own. These examples show that echoing can exist independently of pretence, and hence that echoing and pretence can come apart.

All this suggests that an adequate attributive-pretence account of irony should incorporate two distinct mechanisms which can operate independently of each other. One is a pretence mechanism, based on resemblances in public behaviour, which allows the speaker to perform an imaginary speech act without being committed to its illocutionary force. The other is an attributive mechanism of the type proposed in the echoic account, based on resemblances in conceptual content, which allows the speaker to express her own attitude to an attributed thought. In ironical utterances, the two mechanisms would combine, allowing the speaker to attribute to some actual person or type of person (or people in general) a thought similar in content to the imaginary speech act that she is pretending to perform, and to express a mocking, scornful or contemptuous attitude to this attributed thought. The resulting predictions would largely coincide with those of the echoic account, but would involve two distinct mechanisms where the echoic account has only one.

Here is how the pretence accounts described in this section might explain the distinctive features of irony discussed above.

The ironical attitude
Pretence or imitation can be naturally accompanied by the expression of a mocking, scornful or contemptuous attitude towards the kind of act one is pretending to perform, or the kind of people who would perform it. One can pretend to be an absent-minded professor in order to make fun of academics. One can imitate the way a politician smiles or speaks in order to make him look silly: impressionists do it all the time. However, this is parody, not irony. The mocking or scornful attitude conveyed is not to an echoed thought but to a piece of observable behaviour, a form.

Can non-echoic versions of the pretence account explain how it is possible to convey a properly ironical attitude: that is, an attitude to an attributed thought? According to these accounts, the object of this attitude must be either a speech act that the speaker is pretending

to perform or the type of person who would perform it. If the pretend speech act is a parody of an actual speech act, there is indeed a target for irony. One morning, Peter looks out of the window and says *What a lovely day*. When it starts to rain soon after, Mary says with exaggerated enthusiasm, *What a **lovely** day*, simultaneously parodying Peter's utterance and expressing an ironical attitude to its content. But most ironical utterances are not parodies: they have no real-life counterpart, and are unlikely ever to have one. If they are pretences, it is not at all obvious what is the point of the pretence, what its target is, and hence what makes it ironical (cf. Grice's counterexample). What would be the point of expressing a mocking, scornful or contemptuous attitude to a speech act that no one has performed and that, in many cases, no reasonable person would perform? On this version of the pretence account, many typical cases of irony have no real target.

Hybrid attributive-pretence accounts may of course borrow the explanation of the ironical attitude offered by the echoic account. However, they do not add anything to it. Moreover, if echoing and pretence are distinct mechanisms which can be used independently of each other, as I have tried to show above, it is hard to explain why irony should necessarily involve *both* echoing and pretence, as in hybrid attributive-pretence accounts.

Normative bias
As noted above, it is quite possible to pretend to perform a speech act without imitating and targeting any actual speech act. If irony were achievable simply by performing such a pretend speech act with a mocking attitude, as claimed by non-echoic versions of the pretence account, nothing in the mechanism of irony so understood would explain the normative bias which is not only a distinctive feature of irony but is present from the earliest stages of irony comprehension (as shown in section 2).

Hybrid attributive–pretence accounts may again borrow the echoic explanation of the normative bias, but it is the echoic element, not the pretence element of such accounts that is doing the explanatory work.

The ironical tone of voice
The pretence account makes a clear prediction about the tone of voice used in irony. If the speaker is pretending to make an assertion, we would expect her to maintain the pretence by mimicking the tone of voice that someone actually making the assertion did, or would, use. This is just what Clark and Gerrig (1984: 122) propose:

> In pretense or make-believe, people generally leave their own voices behind for new ones. An actor playing Othello assumes a voice appropriate to Othello. An ironist pretending to be S' might assume a voice appropriate to S'. To convey an attitude about S', however, the ironist will generally exaggerate, or caricature, S''s voice, as when an ironist affects a heavily conspiratorial tone of voice in telling a well-known piece of gossip. … With pretense, there is a natural account of the ironic tone of voice.

However, this is not the regular ironical tone of voice discussed in much of the literature, which takes for granted that the ironical speaker does not leave her own voice behind, but may optionally use a tone of voice designed to reflect her own mocking, sceptical or contemptuous attitude. What Clark and Gerrig describe is the "overly enthusiastic" tone of voice described by Laval and Bert-Erboul (2005), which is parodic rather than ironic. Parody does indeed exploit resemblances in behaviour: the speaker simulates a speech act, mimicking the tone of voice, form of words, etc. that someone genuinely performing that speech act might use. So there are indeed cases where pretence and irony combine, but far from being prototypical cases of irony, they are characterised by a tone of voice quite distinct from the regular 'ironical tone of voice'.

The fact that there is a perceptible difference between ironical and parodic tones of voice was pointed out in Sperber (1984: 135):

> Imagine that Bill keeps saying, *Sally is such a nice person*, and that Judy totally disagrees. Judy might express a derogatory attitude to Bill's judgement on Sally in two superficially similar, but quite perceptibly different, ways. She might imitate Bill and say herself, *Sally is such a nice person*! with an exaggerated tone of enthusiasm or even worship. Or she might utter the same sentence but with a tone of contempt, so that there will be a contradiction between the literal content of what she says and the tone in which she says it. The first tone of voice is indeed one of pretence and mockery. The second tone of voice is the ironic tone, the nuances of which have been described by rhetoricians since classical antiquity.

According to the echoic account, the distinct tones of voice used in regular and parodic irony are linked to different mechanisms: regular irony involves echoing alone, whereas parodic irony involves both echoing and pretence. Hence, these two tones of voice are not free variants: they may follow different developmental trajectories, be associated with different conditions of use and give rise to subtle differences in interpretation, which would be worth exploring further.

5. Implications for developmental studies of verbal irony

I have tried to show that echoing and pretence are distinct mechanisms which can be used independently of each other. Although echoing and pretence may combine, as they do in parodic forms of irony, they do not *necessarily* combine, and most of the examples of irony discussed in this paper involve echoing without any element of pretence. What are the implications of this account for experimental studies of irony comprehension, and developmental studies in particular?

In an interesting exploratory paper on the forms and functions of irony in conversations among adults, Gibbs (2000/2007: 339) took 'irony' in a very broad sense, to cover "jocularity, sarcasm, hyperbole, rhetorical questions and understatements". As his discussion

makes clear, he is using 'irony' not as a theoretical term but in something like its ordinary-language sense, to cover a range of loosely related phenomena, some of which are cases of echoic use, others involve pretence, and still others may have no more in common with typical cases of irony such as (1)-(2) than the evocation of a mocking attitude or some discrepancy between representation and reality. The breadth of the notion of irony used in much of the experimental literature is underlined in a study by Leggitt and Gibbs (2000: 5-6), who give the following operational definitions and illustrations of the "various forms of irony" discussed:

> *Irony*: "The speaker's observation of a contradictory state of affairs, but not directly critical of the addressee." *Sarcasm*: "A statement that clearly contradicts the knowable state of affairs, and is harshly critical toward the addressee." *Hyperbole/ Overstatement:* "A description of the state of affairs in obviously exaggerated terms." *Understatement:* "A description of a state of affairs as clearly less important than it appeared in context." *Satire:* "A statement that appears to the support the addressee, yet the speaker actually disagrees and mocks the addressee." *Rhetorical question:* A question that is obviously false in a given context."

> **Example 1** (Leggitt & Gibbs 2000: 23)
> You are going with a group of friends to a movie. All of them want to see the same movie except for you. You say you will leave them if you don't get your way. Jennifer thinks you won't change your mind, and says:
>
> | | |
> |---|---|
> | *Ironic*: | We always get along so well. |
> | *Sarcastic:* | You are being so mature |
> | *Overstatement* | This is the end of the world |
> | *Understatement* | You are being a little silly |
> | *Satire/Parody:* | You will want to see a cartoon |
> | *Rhetorical question* | Do you know how to compromise? |

Similar operational definitions and illustrations are quite widely used in the developmental literature. I have tried to show above that regular irony and parodic irony involve different mechanisms, which may follow different developmental trajectories . I now want to argue that some of the phenomena currently treated as forms of irony in the developmental literature show none of the distinctive features of irony in most of their uses, and are not inherently ironical at all.

Consider jocularity, one of the phenomena often treated as ironical in the experimental literature (Gibbs, 2000; Pexman et al., 2005). As examples of jocularity, Gibbs (2000/2007: 350) gives (27)-(28):

(27) (*to someone who has just solved a difficult problem*): Dumb bitch!

(28) (*by someone known to be a good lover):* I'm not all that good in the sack anyways, so you're not missing out on much.

He notes that among the jocular utterances in his corpus of conversations among students, there were significantly more negative statements such as (27)-(28) which were used to convey a positive meaning than positive statements used to convey a negative meaning. In other words, jocular utterances do not exhibit the normative bias widely noted in the rhetorical literature and confirmed in experimental studies by Kreuz and Glucksbeerg (1989) and Hancock, Dunham and Purdy (2000). Gibbs takes this result to underline the inadequacy of traditional descriptions of irony as a matter of saying one thing and meaning the opposite. But as suggested above, the normative bias is a distinctive feature of all genuine cases of irony, including declaratives, as in (1)-(2), interrogatives, imperatives or hyperboles such as (7)-(9), or exclamatives, of the type used in sections 3 and 4. Given this normative bias, for (27)-(28) to be genuine cases of irony, the speaker would have to be ironically echoing a doubt or suspicion that someone had previously entertained or expressed. But there is no evidence for this in Gibbs' examples, and the fact that this type of negative utterance occurs so frequently in his corpus suggests that some different, non-echoic mechanism is being used.

In fact, example (27) looks like a case of banter or teasing similar to (12) above (repeated here for convenience):

(12)   *(to a close friend who has just come in)*: Here comes trouble!

Both examples fit the definition proposed in Leech's 'Banter Principle':

> In order to show solidarity to the hearer, say something which is (i) obviously untrue, and (ii) obviously impolite to the hearer. (Leech 1983: 149)

Although banter and irony may be similar in form, banter exhibits none of the distinctive features of irony: it does not express a mocking, scornful or contemptuous attitude to an echoed thought, it does not show a normative bias, and it does not use the regular ironical tone of voice. In fact, banter is probably best analysed as a non-ironic form of pretence. If so, including it in developmental studies of irony sheds no light on how the mechanisms for irony comprehension develop, although the study of banter, jocularity and teasing are interesting in their own right.

Or consider the range of examples labelled "ironic complements" in the developmental literature. In Hancock, Dunham and Purdy's (2005) 'Weight-Lifter Story' (repeated below for convenience), B's remark *You're really bad at lifting weights* was regarded as an ironic compliment regardless of whether it was preceded by a boast (*I'm good at lifting weights*) or an expression of self-doubt (*I'm really bad at lifting weights*):

Weight-Lifter Story (complimentary version)

A:	I'm [*good/bad*] at lifting weights.	[A lifts weight]
B:	You really are bad at lifting weights.	[Ironic compliment]

But because of the normative bias shown by genuine cases of irony, a negative remark such as *You're really bad at lifting weights* is only properly regarded as an ironic compliment if it echoes a doubt or fear about A's performance that has previously been entertained or expressed. Thus, if uttered in response to A's self-critical remark *I'm bad at lifting weights*, it would be a genuine case of irony. By contrast, if uttered in response to A's boastful remark *I'm good at lifting weights,* it would exhibit none of the distinctive features of irony, and would be better analysed as case of banter or teasing (i.e. of non-ironic pretence). Yet the remark *You're really bad at lifting weights* is quite generally regarded as an 'ironic compliment' in either condition (Filippova and Astington, 2010, Filippova, forthcoming). It would be interesting to investigate possible developmental differences between the two types of case.

Finally, consider hyperbole, which seems to be widely regarded as a form of irony not only in the experimental literature but in many treatments of rhetoric in the US. It is certainly possible for irony and hyperbole to combine, as in (9) above, which implicates that the lecture was very boring indeed:

(9)   *(after a boring lecture):* I was on the edge of my seat.

Here, the use of hyperbole is naturally seen as a cue to the speaker's mocking, scornful or contemptuous attitude. This was experimentally tested by Kreuz and Roberts (1995), who gave adult participants alternative versions of scenarios such as the following, containing one or other of the italicised sentences, and asked them to judge how likely it was that the italicised sentence was being used ironically:

> Harry was helping Pat move into her new apartment. "Don't worry, I can move this grandfather clock by myself, said Harry, who was very muscular.
> Harry only managed to tip the clock over, and it crashed to the floor.
> Pat looked up from some boxes she was moving, and said *Thanks for helping me out / I'll never be able to repay you for your help!*

The results showed that the hyperbolic version *I'll never be able to repay you for your help* was judged more likely to be ironical than the non-hyperbolic version *Thanks for helping me out*. These combinations of hyperbole and irony show all three distinctive features of irony: normative bias, expression of a mocking, scornful or contemptuous attitude to an attributed thought, and possibility of using the regular ironical tone of voice.

But hyperbole is not *necessarily* ironical. In classical rhetoric, it is seen as much closer to metaphor than to irony. For instance (29)-(30) would be understood in very similar ways, and there is room for debate about whether (29) should be classed as a case of metaphor or hyperbole:

(29)   (*to a very tall man*) Wow! You're a giant!

(30)   Wow! You're the tallest man I've ever seen!

A recent corpus analysis of the uses of hyperbole in English by Claridge (2011) clearly shows the links between hyperbole and metaphor but barely mentions any connection with irony. Yet examples similar to (30) are routinely included in the data for developmental studies of irony comprehension. For instance, Recchia et al. (2010: 256) treat both hyperbole and understatement as forms of irony, and define them as follows:

> The literal and intended meanings of hyperbole and understatement differ in strength, but not valence. Compared to the intended meaning, the literal meaning of hyperbole is exaggerated (e.g. *I have the biggest sandwich in the world*) and the literal meaning of understatement is muted (e.g. *I'm just a tiny bit angry at you right now*).

But the forms of hyperbole and understatement used in their definitions show none of the distinctive features of irony: they do not express a mocking, scornful or contemptuous attitude to an echoed thought, exhibit no normative bias, and would not use the regular ironical tone of voice. The same point applies to the examples of overstatement and understatement given in Leggitt and Gibbs' (2000) Example 1 above, and to many of the rhetorical questions used in the literature. In other words, hyperbole, understatement and rhetorical questions are not inherently ironical, and should not be expected to follow the same developmental trajectory as genuine cases of irony. These phenomena exploit a disparate range of mechanisms which are well worth studying in their own right, and new theoretical accounts and experimental paradigms are needed to prise them apart.

6. Concluding remarks

Developmental studies of irony comprehension – even under the broad conception of irony used in many of these studies – provide valuable insights into the nature and development of the echoic/attributive mechanism used in both regular and parodic cases of irony. Because regular and parodic irony have not been systematically distinguished, possible differences in their developmental trajectories have not been systematically explored. For instance, children use pretence very early, and we might expect to find non-echoic parodies of speech acts (exaggerated imitations used to mock a piece of behaviour or a person) being produced and understood much earlier than regular or parodic forms of irony. The fact that regular and parodic irony each has a characteristic and perceptibly different tone of voice provides a useful means of distinguishing the two.

I have argued that of the broader range of phenomena commonly treated as forms of irony, hyperbole, understatement, rhetorical questions and various forms of jocularity or teasing are not inherently ironical, and involve a rather disparate range of mechanisms. For instance, relevance theorists treat hyperbole is a type of loose use of language closely related to metaphor (Wilson and Carston, 2007; Sperber and Wilson, 2008), which does not involve the

expression of a characteristic attitude or tone of voice, and combines as easily with non-echoic forms of parody as with irony. By contrast, I have suggested that jocularity, banter and teasing may be non-echoic forms of parody or pretence, and may be produced and understood much earlier than genuine cases of echoic irony. Developmental studies of hyperbole, banter and teasing could provide valuable insights into how these mechanisms develop, and help us construct adequate theories.

In fact, developmental studies have already brought to light an interesting feature of jokes which links them more closely to irony than to metaphor, and which an adequate theory ought to explain: in at least some of their uses, they appear to require a higher order of metarepresentational ability than metaphor, and to correlate with success in second-order false-belief tasks. Many of these studies test the child's ability to distinguish between jokes – which are not intended to deceive an audience – and lies – which are (Leekam, 1991; Sullivan, Winner and Hopfield, 1995; Winner et al., 1998; Sullivan, Winner and Tager-Flusberg, 2003). The results show a clear correlation between the ability to attribute second-order mental states (e.g. *Frank knows that Grandpa knows that he did not clean up the dishes*), and to tell lies from jokes. Interestingly, children who fail to distinguish lies from jokes tend to treat jokes as lies, rather than vice versa (this fits with a comment by Creusere, 2000: 29 that in early studies of irony comprehension, adults misinterpreted sarcasm as deception 46% of the time.)

In a recent developmental study, Mascaro and Sperber (2010) have traced the development of the ability to cope with intentional deception and shown that it has two sub-components which are not fully in place until around the age of six: the *epistemic* ability to recognize false utterances as such and draw appropriate inferences, and the *mindreading* ability to recognise that the speaker intends to conceal from them her opinion that a certain proposition is false. It would be interesting to explore the implications of this work for the understanding of both irony and jokes.

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