Pragmatic evidence, context, and story design: an essay on recent developments in experimental pragmatics

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ABSTRACT

What is pragmatic evidence? In this contribution, I argue that pragmatic evidence basically is connected with pragmatic intuitions related to a context. The context usually is either given as a story, or is left to the imagination of a judge (a linguist, a reader, a test participant). It is shown that stories not only play an important role in pragmatic argumentation and analysis, but also with regard to story design in experimental settings.

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1. Introduction

In a loose sense, those judgments count as pragmatic evidence that are related to pragmatic phenomena, and reflect pragmatic intuitions of a speaker or hearer. Of the numerous examples that could be given here, I would like to pick out one particular piece of pragmatic evidence given in the seminal paper by Kaplan (1999). In that paper, Kaplan discusses at length the meaning of the interjections ouch and oops, arguing that they may be paraphrased as in (1b) and (2b), respectively.

(1) a. Ouch.
   b. I am in pain..
(2) a. Oops.
   b. I have just observed a minor mishap.

On p. 14, Kaplan explains: “I think that the rule for ‘ouch’ is reasonably simple: that the agent of the context has just experienced a sudden (and sharp) pain.” Note that Kaplan appears to be unsure about the exact description of the meaning of ouch, as indicated by the brackets.

The point is that, according to his theory of Meaning as Use, (1a) and (1b) are informationally equivalent, but not logically equivalent, because you cannot derive ouch from I am in pain or the reverse. And similarly for (2a) and (2b). Moreover, while both interjections are expressives, there is an important difference between them in that ouch is a subjective expression related to the mental state of the speaker (to which only he has a privileged access), while oops is an objective expression that may be related to some objectively judgeable state of affairs. This latter point is illustrated at length by telling a story about a person in a glassware store bumping into a small pyramid of glasses set up on a table (pp. 18–19). Here, it is possible to utter oops as a mere observer; it is cynical, when “the bump had caused the whole building to collapse, killing hundreds of people”, and it is incorrectly used, when the mishap is part of the making of a movie.

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Well, here we are: Pragmatic evidence is more often than not construed as a story, the story reflecting pragmatic intuitions of a speaker or hearer (and in this case, those of the author). Why should stories be told in pragmatic analysis? Because they are means to condense context; and context in its relation to meaning is at the core of pragmatic analysis.

In a recent paper dealing with experimental pragmatics, Noveck and Sperber (2007) comment on the “limits of pragmatic intuitions as evidence”. Look at the sentences given under (3):

(3) a. John knows that it is raining.
   b. It is raining.

While speakers have direct to access to semantic evidence of the kind that leads us to think that (3b) follows from (3a), pragmatic intuitions are different (p. 185):^2^ 

“Quite generally, pragmatic intuitions invoked in theoretical pragmatics are not about actual utterances addressed to the reader of a pragmatic article, but about hypothetical cases involving imaginary or generic interlocutors.”

These pragmatic intuitions are, according to the authors, at best “educated guesses”, calling for the stricter methodology of experimental pragmatics. While I think that this is the right way to go, I will point out that stories still play an important role in the actual debates in cognitive pragmatics, this having to do with the central notion of context. Experimental pragmatics, I will show, cannot get rid of stories: they form an integrated part of research methodology.

The outline of this contribution is as follows. Because pragmatics is a wide field, and I want to focus on cognitive aspects of pragmatics, I will sketch in Section 2 two rivaling pragmatic theories that strive for cognitive adequacy, namely PM theory and RT theory. One particular notion that matters here is the notion of GCI (Generalised Conversational Implicature), a notion originally introduced by Grice (1989). This notion, and its counterpart, the Particularised Conversational Implicature (PCI), have to do with the notion of context, which is crucial for pragmatic theory. In Section 3, I will go onto illustrate that stories representing authentic or imaginary context belong to the tradition of pragmatic argumentation, and play a major role when showing, e.g., that a certain meaning phenomenon will show up in one context, but not in an other. This demonstration is usually connected with the application of cancellability tests, but also when it comes to demonstrating the difference between GCI and PCI. In Section 4, I will go into an inspection of recent experiments dealing with scalar implicatures, these being bona fide cases of GCI. The experimental design typically draws on stories presented to the test participants. I will show that the interpretation of these results has to do with aspects of context, as represented by the stories themselves or as the context of the test situation. Finally, I suggest that experimental pragmatics will profit from a more systematic reflection of the notion of context and the stories intended to represent contexts.

2. Cognitive pragmatics

By “cognitive pragmatics”, I understand pragmatics modelled with respect to human capacities in the acquisition, production, and interpretation of utterances. Here, I want to focus on two prominent pragmatic theories, namely PM theory and RT: “PM” stands for the “Presumptive Meanings” approach by Levinson (2000), and “RT” stands for “Relevance theory”, as developed in Sperber and Wilson (1995) and, more recently, in Carston (2002). Both approaches are post-Gricean in that they elaborate Gricean ideas, but aim at a more comprehensive, cognitive theory of pragmatic inferencing. It is clear that such an endeavour is also connected with the classical task to provide an optimal theory about the semantics/pragmatics interface, see Meibauer (2006) for an overview.

A look back onto Grice’s theory shows us that Grice (1989) saw his theoretical sketch as a study of rational behaviour. He was not really interested in the psychological reality of his famous working out scheme for conversational implicatures that inspired so many writers. So Saul (2002) is perfectly right in arguing that Grice’s project and RT are different, because Grice did not strive at psychological reality as RT theorists do.

Although PM theory and RT have been involved in a number of battles over the years, they share some basic tenets: Pragmatic theory should be economical, compatible with findings about cognitive processing, and modular in the sense that semantic and pragmatic aspects of meaning should not be conflated. “Pragmantics”, the view that there is no ***semantics/pragmatics boundary at all, ascribed by Levinson (2000, p. 243) to so-called Cognitive Linguists like Ronald W. Langacker and Ray Jackendoff, is then a camp not sympathised with by both PM theory and RT.

What is, then, the main difference between the “Neo-Gricean” theory of Levinson, and the Relevance Theorists like Carston? At the heart of the debate is a different understanding of the role of linguistics or the grammatical system in pragmatic theory. While Levinson develops a theory of Generalised Conversational Implicature (GCI), thereby aspiring to isolate a set of pragmatic phenomena that are relatively context-independent, RT emphasises that all processes of meaning construction are steered by the operation of the First (cognitive) principle of relevance (Carston, 2002, p. 379), saying that “human cognition is geared towards the maximisation of relevance (that is, to the achievement of as many contextual (cognitive) effects as possible for as little processing effort as possible)”.

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^1^ Note that the reader is addressed by you.

^2^ For problems with semantic evidence, see Krifka (2012).
This does not exclude that both competitors have, at least from a bird’s eye view, similar notions in their terminological arsenal: while Levinson stresses the fact that there is a phenomenon called “pragmatic intrusion into what is said”, giving rise to the idea of a presemantic pragmatics, Carston (2002, p. 377) speaks of “explicature”, understood as an “ostensively communicated assumption which is inferentially developed from one of the incomplete conceptual representations (logical forms) encoded by the utterance”. Many similar notions are on the market, as a quick glance into the recent pragmatic approaches of Ariel (2008), Bach (1999), Jaszczolt (2009), Récanati (2004), and others show.

In what follows, I will concentrate on the notion of the GCI. Why is that an interesting, maybe even central notion for pragmatic theory? Recall that Grice (1989) introduced the concept of a conversational implicature by way of telling the story of someone asking how C was getting on in his new job, the answer being that he was quite well and has not been to prison yet. Because of the necessary background information about C’s earlier life, the arising implicature ‘C is potentially dishonest’ is considered as a Particularised Conversational Implicature (PCI). In contrast, GCIs are characterised as relatively context-independent inferences. Levinson’s PM theory is an attempt at clarifying this distinction between GCI and PCI that he nicely demonstrates with the following two types of context (Levinson, 2000, pp. 16–17):

(4) Context, 1
Speaker A: What time is it?
Speaker B: Some of the guests are already leaving.
PCI: ‘It must be late.’
GCI: ‘Not all of the guests are already leaving.’

Context, 2
Speaker A: Where’s John?
Speaker B: Some of the guests are already leaving.
PCI: ‘Perhaps John has already left.’
GCI: ‘Not all of the guests are already leaving.’

Because the implicature (‘... not all ...’) triggered by some arises in both contexts, it is relatively context-independent. Relative context-independence is the most prominent property of GCIs. In addition, GCIs are normally, or even consistently, associated with certain linguistic forms. For example, if someone utters Peter is meeting a woman this evening it is, because of the indefinite article, standardly implicated that the woman is not his wife, close relative, etc. (cf. Grice, 1989, p. 37). In contrast to GCIs, PCIs are highly context-dependent, and they are not consistently associated with any linguistic form. If these “educated guesses” have empirical content, then one would wish to have further pragmatic evidence on the issue.

The GCI–PCI-distinction is most forcefully attacked by RT. Typically, it is argued that the distinction is completely weird, because all inferencing is context-driven and governed by the need for the observation of Principles of Relevance. But the notion of an ‘explicature’ that is designed to account for typical cases of underdeterminacy of form, is a close relative of ‘pragmatic intrusion into what is said’, giving rise to the idea of a presemantic pragmatics, Carston (2002, p. 377) speaks of “explicature”, understood as an “ostensibly communicated assumption which is inferentially developed from one of the incomplete conceptual representations (logical forms) encoded by the utterance”. Many similar notions are on the market, as a quick glance into the recent pragmatic approaches of Ariel (2008), Bach (1999), Jaszczolt (2009), Récanati (2004), and others show.

Fanciful stories? Alas, fanciful stories were always with pragmatics, and, as I would like to show, this is not a mere accident. Stories appear to play an important role in pragmatic analysis, and it is hard to see, whether pragmatics can (or should) do without them.

3. Pragmatic evidence

It must be possible to settle quarrels of this kind by clarifying what pragmatic evidence is, and what pragmatic evidence we have for the necessity of pragmatic notions such as ‘pragmatic intrusion into what is said’, ‘explicature’, or ‘impliciture’. The road map is simple: First, to explicate one’s notion of context. Second, to explain what context-independency is. Pace Noveck and Sperber (2007) and Bach (2007), I would like to show that (more or less fanciful) stories are important methodological tools in pragmatic research, not only in the generation of “educated” guesses, but also in experimental designs. But we seem to face a paradox here: In so-called “neutral” contexts (if there exists such a thing at all), we do not learn much about context; however, if contexts are enriched, it is getting hard to control for all the factors that may play a role in a certain judgment.
Context. One core notion in pragmatic research is, obviously, the notion of context. In a recent paper devoted to an attack on so-called contextualists, Bach (2005, p. 21) explains:

“What is loosely called ‘context’ is the conversational setting broadly construed. It is the mutual cognitive context, or salient common ground. It includes the current state of the conversation (what has just been said, what has just been referred to, etc.), the physical setting (if the conversants are face to face), salient mutual knowledge between the conversants, and relevant broader common knowledge.”

Similar definitions abound in the literature, without any shame about the “loose” character of the definition. In fact, most researchers would frankly admit that it is impossible to exhaustively describe one single context. Therefore, in arguing for or against a certain view, “salient” aspects of an imaginary or authentic context are highlighted. Whose salient aspects? Here the battles about the “boundary” between semantics and pragmatics start.

Cancellability. There is one single test in the literature which is used by all researchers alike, namely the cancellability test (defeasibility test). Its rationale may be explained in the following fashion:

(5) Cancellability
If there are two meaning aspects x and y, and y may be cancelled while x may not, then y is pragmatic in nature, while x is semantic.

In a recent article, Weiner (2006) argues that there are cases of implicature where the cancellability test fails (see also Huitink and Spenader, 2004; Burton-Roberts, 2006). Here is a story provided by Weiner (2006, p. 128) that is intended to prove the point:

(6) Crowded train a
Suppose that Alice and Sarah are in a crowded train; Alice, who is obviously able-bodied, is sprawled across two seats, and Sarah is standing. Sarah says to Alice, ‘I’m curious as to whether it would be physically possible for you to make room for someone else to sit down.’ The implicature is that Alice should make room. It is extraordinarily unlikely that Sarah really is curious about whether Alice is physically capable of moving, since it is mutually obvious that she is capable.”

a My title.

Thus, as Weiner points out, Sarah has flouted Grice’s first maxim of Quality. But the implicature may not be cancelled: “Suppose now that Sarah adds, ‘Not that you should make room; I’m just curious.’ This has the form of an explicit cancellation of the implicature. Nevertheless, the implicature is not cancelled. Sarah is still suggesting, even more rudely, that Alice should make room.” And with her second remark, she flouts the first maxim of Quality again. One could also argue that, by her second remark, Sarah reinforces the implicature instead of cancelling it.

I find examples like these quite convincing: In very many cases, explicit cancelling “by the addition of a clause that states or implies that the speaker has opted out” (Grice, 1989, p. 39), e.g., by the addition of statements like but not p or I do not mean to imply that p, is, to say the least, not quite plausible. That the speaker was in fact ironical or metaphorical, etc. is mutually known to both participants, because the speaker has made clear that this was his intention.

But, of course, there is the possibility of cancelling by an imaginable alternative context where the implicature does not arise in the first place. Thus, contextual cancelling is given, “if the form of utterance that usually carries it is used in a context that makes clear that the speaker is opting out.” (Grice, 1989, p. 39).

Blome-Tillmann (2008, p. 159) accepts these difficulties with contextual cancelling. But for him, it is not an argument against cancellability altogether, because explicit and contextual cancelling are related. For every context, where explicit cancelling does not work, there is a possible contextual alternative where it does work.

Jaszczolt (2009) attacks this proposal in turn. First, “explicit and contextual cancellation should not be discussed as part of the same test” (p. 262), because the two criteria “belong to very different levels of language description” (p. 264). Second, against Weiner and Blome-Tillmann, “a particular scenario on which an implicature cannot be cancelled cannot ever constitute a counterexample to cancellability tout court.” (Jaszczolt, 2009, p. 267). Third, Jaszczolt worries about the fact that explicit cancellability is a problematic criterion for those working with authentic discourses, and that it is hard to separate it from repairs. And fourth, she points out that Grice “himself did not regard cancellability as a decisive criterion in distinguishing implicatures” (pp. 263–264), for example, when “using a word or form of words in a loose or relaxed way” (Grice, 1989, p. 44).

I conclude from this discussion that there are indeed cases, where explicit cancelling is not possible. But this appears to have no repercussion on the general notion of implicature, where at least contextual cancelling should be possible. Thus, to imagine a plausible context or refer to a particular authentic context remains an important tool in pragmatic argumentation.

The need for a story. That Weiner argued by telling a story, is by no means an accident. The philosophy of language and pragmatics are full of stories. To tell a story and to modify that story step by step is a common rhetorical move in philosophical debates as well as in pragmatics. Part of the appeal of pragmatics to a wider audience certainly has to do with our willingness to reflect about stories. In the process of reflecting about stories, we compare the story told with our own
experiences, i.e. a set of contexts we remember, sharing some properties with the story told. Pragmatic intuition, seen in such a way, is nothing else than story competence.

Stories always played an important role in pragmatic argumentation and analysis. Here are some examples. Anscombe (1957/1963, p. 56) told us the story of the detective in the supermarket, leading to Searle's notion of 'direction of fit'. If someone follows his shopping list and puts certain things into his shopping cart, then his acts are directive in nature; the detective, however, who observes the shopper, asserts on his list what the shopper has put into his shopping cart.

Searle (1969) told us the story of the American soldier in Italy. It would be absurd, he argued contra Grice, to assume that an American soldier, captured by Italian soldiers during World War II, could generate the impression that he was German by uttering the single German sentence he knows, namely “Kennst du das Land, wo die Zitronen blühn?” (see Meggle and Ulkan, 1979).

Grice’s seminal paper on “Logic and Conversation” (1989/1975) is, of course, choque-full of little stories, about disastrous singing, beautiful handwriting, Jones’ girlfriend in New York, proud generals, etc.

I could add pragmatic stories told in the literature ad libitum. What I like to argue here is that these and other stories are not only intended to merely illustrate a point. They serve as a piece of pragmatic evidence, albeit evidence presented on the basis of the pragmatic intuition of one single speaker. As speakers, we have access to an imaginary or past authentic context only via the representation of stories. In sum, then, stories are essential to pragmatic analysis, because they constitute pragmatic evidence.

In a recent article on the notion of communicative context, Hanks (2009, p. 125) said:

“This is one of the most difficult problems in the study of context: in order to achieve a general account, we formulate schematic regularities, yet in order to actually engage in discourse, speakers and addressees must come to grips with emergent particulars.”

The need for a story, so we can speculate, could have to do with the need to overcome these difficulties, because stories are selective with respect to full contexts, emphasise particulars, and refer to schematic regularities only where necessary.

Note that where authors sometimes produce single, invented stories for the sake of argument, in experimental designs groups of participants are tested for comprehension of a story. However, these stories are usually invented by individual researchers, and it is the individual test participant whose judgments go into a pragmatic generalisation.

4. A story about experimental pragmatics

With the advent of experimental pragmatics, things appear to have changed. Away with armchair theorising, away with more or less witty stories that merely illustrate points in a quite subjective manner, instead of providing hard and fast evidence: Pragmatic evidence is to be sought in pragmatic experiments. But a closer look at recent experimental studies shows that stories are still with us, and, as I venture, necessarily so. I will illustrate the point while reviewing recent research on the acquisition of scalar implicatures. This strand of research is basically connected with two questions, to which I will turn to in the next paragraphs: First, are children “more logical” than adults? Second, is there evidence for or against GCI (or the “default view”)?

Children are more logical than adults (without context?). In experimental pragmatics, there is a need to strictly separate lexical knowledge from contextual or encyclopedic knowledge. But it appears that where no explicit context is given, test persons tend to construe a more or less fitting context. And even if an explicit context is given, it is hard to control for all aspects of knowledge that may go into a judgment.

For instance, in one experiment dealing with scalar implicatures triggered by the French quantifier certains (scale: <tous, certains>), children and adult controls were asked whether they agreed with the utterance in (7) (cf. Noveck, 2001, Experiment III).³

(7) Some giraffes have long necks.

“Logical” children reacted with “yes”. Possibly, they reasoned that even if all giraffes had long necks, it is at least true that some have long necks. Thus, 89% out of 31 children aged 7–8, and 85% out of 30 children aged 10–11 agreed. In contrast, “pragmatic” adults answered “no”. For them, it would be underinformative to answer yes, because, as far as they know, all giraffes have long necks. From 15 adults, 41% agreed.

But it seems that it is expert knowledge that matters here.⁴ What, if children were not more logical, but more cautious in comparison to the adults? After all, there could exist some giraffes (e.g., a certain species, or baby giraffes) that have short necks indeed. And even some adults may have entertained such thoughts. More generally, then, it may be asked whether and to what extent expert knowledge influences the generation of pragmatic inferences.

³ More exactly, the French translation, focusing on <tous, certains>.

⁴ For an attempt at neurolinguistically testing the influence of expert knowledge on generating pragmatic inferences, see Schumacher and Meibauer (2012), drawing on previous work of Burkhardt (2006).
In subsequent studies, contexts were more or less enriched in order to control for contextual knowledge. In Papafragou and Musolino (2003), where the Greek quantifier meriki (scale: <oli, meriki>) was tested, the focus was on felicity instead of truth:

“If preschoolers, unlike adults, cannot readily infer the pragmatic nature of the task, and are not given adequate motivation to go beyond the truth conditional content of the utterance, they may readily settle for a statement which is true but does not satisfy the adult expectations of relevance and informativeness.” (Papafragou and Musolino, 2003, p. 269)

In their acting out-Experiment 1 using Truth Value Judgment Test methodology, children were shown three toy horses which were about to jump over a toy fence. When all horses had jumped over the fence, a puppet commented on that event with, e.g., Some horses jumped over the fence, and children were asked whether the puppet “answered well” (focusing on felicity). Adults rejected the puppet’s statement in 92.5% of the time, whereas 5-year-olds rejected the puppet’s statement only in 12.5% of the time. But while the relevant context is explicitly given here, the wider context, including the authority of the puppet commenting on the scenario, may have influenced the results. This possibility, however, was denied by the authors, since control items yielded fitting results (p. 268). Nevertheless, it appears that evaluating utterances of a puppet character is different from spontaneously describing a scenario. Obviously, the introduction of a puppet character is intended to more easily invite children to give answers. This, however, presupposes that children are able to understand the utterances of the puppet character in relation to the scene displayed.

Admittedly, this experimental design (except for the puppet character) comes close to a neutral context, because the relevant information is evident to the participants. But it may be questioned that this is a natural discourse situation where it is typical that part of necessary information is backgrounded or has to be inferred. In a “neutral” situation, where all the evidence is present, participants may very want why questions concerning evident fact are asked at all. In this case, observation of authority (after all, the researcher must have a reason for asking questions) might take over and influence the results.

A narrative element, mimicking a certain aspect of a discourse situation, was also introduced into the methodology used by Bott and Noveck (2004) who otherwise used the material from Noveck (2001). In their Experiment II, basically a Truth Value Judgment Test where sentences were presented on a screen, the stimuli were preceded by a declaration like “Mary says the following sentence is true/false”. This declaration was intended to make a comparison between a “logical” and a “pragmatic” group of participants possible. Note, however, that a speech report becomes part of the context.

While the general impression from Noveck (2001) and Papafragou and Musolino (2003) was that children are more logical than adults indeed, Guasti et al. (2005) stress that children as young as 7 are able to derive (adult-like) implicatures “when the contexts meet all the cognitive and linguistic requirements for doing so” (p. 672). In their Experiment I, the authors replicated Noveck (2001) and found that children accepted “statements like some giraffes have long necks much more often than adults do: 87% compared with 50%”. (Again, it might be asked why so many adults were “logical”.) The authors ventured that these results may not have to do with a simple lack in children to derive implicatures (Pragmatic Delay hypothesis), but with (unnatural) features of the experimental design (Pragmatic Limitation hypothesis). Their Experiment 4 was especially designed to account for the influence of context.

“In our version of the TVJT, children watched a video featuring an experimenter acting out stories and props and toys and holding a puppet, Carolina, who was watching the stories alongside the child. At the end of each story, Carolina said what happened in the story. The child was instructed to say whether Carolina’s statement was a good or a bad description of what happened, and to explain her answer whenever she judged Carolina to have ‘said the wrong thing’. Children were previously familiarised with Carolina, and had been informed that Carolina was still a baby and, for his reason, she would sometimes be unable to correctly describe what happened in the stories.” (Guasti et al., 2005, p. 686)

It is clear that several abilities of the children are relevant here: to understand a video (visual literacy), to understand reported speech, to evaluate something with regard to truth/falsity, to understand that babies are not always competent in correctly describing things, etc. On the one hand, the context is enriched, on the other hand, it is getting more and more difficult to control for all of these competences which were activated in fulfilling the tasks.

Also the stories presented to the children gained in complexity:

“For example, one story featured five soldiers that had to go far away to collect a treasure and could either go by motorbike or ride a horse. Initially, there was some discussion among the soldiers; some soldiers said that they would like to go

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3 This corresponds to the objection that it might be easier to agree to a statement than to reject it.
by motorbike, since motorbikes are fast; other soldiers argued that gasoline is expensive and that it would be better to ride a horse. After this discussion, they all choose to ride a horse. Then, Carolina was asked to say what was happening in the story. In the present case, Carolina’s description would be: Some soldiers are riding a horse. Then, the child was invited to say whether what Carolina has said was ‘right’ or ‘wrong’.

Again, to understand such a story is highly demanding. The discussion between the soldiers obviously has the effect of contextualization, i.e. the children were made familiar with a certain background. In particular the decision of all of the soldiers to ride a horse may have to do with the results of the experiment, where the rejection rate was 75% for the group of the 7-year-old children and, quite astonishingly, 83% for the adults. Thus, it is demonstrated that adults have to decide between agreement and disagreement similar to the children, and that there is a tension between opting for “standard conversational norms” versus adhering to strict truth (p. 691).

In sum, then, it could be argued that variation in child as well as adult judgments has to with strategies salient in particular experimental settings, providing more or less contextual clues.

Breheny et al. (2006) used yet another method to include context, namely short texts that made the background clear to the participants. Since they aimed at reading times of a trigger-containing text segment, the texts were presented on a video screen. In Experiment I, focusing on scalar implicatures with (the Greek correlates) of or, the materials contained short stories like the following:

(8) Adult’s reactions to Some giraffes have long necks (=a) adopt the standard conversational norms and infer the implicature in the usual way and reject (a) as false.

Adults that disagree

(i) See that (a) with implicature is false. Conclude that the standard conversational norms, for some reasons (it is an experiment), are not being followed and the ‘logical’ meaning must be what is intended.

(ii) See that (a) with implicature is patently false. Extend the contexts to a non-canonical one so as to make (a) true.

Participants were students between 19 and 25 years, so that background relating to university courses is presupposed. The overall result was that reading times were longer in Upper bound contexts, i.e. with the implicature.

In sum, then, experimental designs cannot do without representing rich contexts, because participants usually react to such rich contexts and are at a loss when forced to act without them. If “neutral” contexts are demanded, participants try to create contexts on their own (Guasti et al., 2005, pp. 684–85). And even if it is assumed that participants are able to construct a “neutral” context, the use of certain language materials “can create their own context through a variety of presupposition triggers and information-structure triggers”, as Breheny et al. (2006, p. 445) stress.

Is there evidence for GCI? Part of experimental research focusing on scalar implicatures is motivated by the attempt to decide between two competing pragmatic models, PM theory (also dubbed Default view) and RT (also dubbed Context Driven view). With regard to the speed of interpretation, when an enriched interpretation is not primed, Noveck and Sperber (2007, p. 196) assume the predictions in the following (here slightly adapted) Table 1.

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<td>Noveck and Sperber (2007, p. 208) assume the predictions in the following (here slightly adapted) Table 1.</td>
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6 Note that already Harnish (1982) argued against Katz (1977) that there is not such a thing as a neutral context.

7 This result was also achieved in an ERP study by Noveck and Posada (2003, p. 204), proposing “that implicatures are part of a late-arriving, effort-demanding decision process”.
veck (2004) and Breheny et al. (2006) conclude that the derivation of scalar implicatures is highly context-dependent and does not show the autonomy claimed by default approaches such as Levinson's, this does not, in my mind, render the notion of a GCI totally superfluous. After all, a GCI might be a type of conversational implicature that is recurrently derived in a number of contexts, as perceived by hearers. There may still be room for a pragmatic theory that views GCIs as “regularities of use that, despite being systematic, should not be confused with linguistic meanings”, as Bach (2007, p. 27) put it.

Pragmatic productivity: In this connection, one would like to have data on pragmatic productivity, for instance defined as the likelihood to come across typical contexts displaying scalar implicatures. Not much is known in this respect, but Corpus Pragmatics will be helpful here (cf. Romero-Trillo, 2008). The point is that knowledge about typical contexts may still play a role when the single-context sensitive pragmatic system assumed by the context-driven view is active. If an adult individual has experienced many contexts where the implicature some ++ not all was necessary, but only some contexts where some if not all was required, then this experience could guide this individual in her interpretation. Since children are not so much experienced as (some) adults are, it might be reasonable for them that they tend to stick to “clear” (or “logical”?) cases.

Particularised Conversational Implicature: To elaborate on the distinction between GCI and PCI would require experimental testing of PCIs, a task demanding even richer contexts. The original distinction still has its appeal when considering different types of triggers, as for example the indefinite article versus knowledge of the past of a colleague, as in the famous story of the “mutual friend, C, who is now working in a bank” (cf. Grice, 1989, p. 24). Even if RT is right in its assumption that there is only one context-driven interpretation process, this does not render the distinction between GCI and PCI (or a scale ranging between the poles of “more general” and “less general”) superfluous.

Pragmatic intrusion versus explicature: RT argues against the notion of GCI, but also assumes a systematic underdeterminacy of propositions. In a similar vein, PM theory assumes pragmatic intrusion into what is said. Therefore, one should extend experimental pragmatics to test for explicatures in order to compare the results with those obtained when testing (scalar) implicatures. For explicatures, one could hypothesize, processing speed should be faster, since they are conceived as developments of a logical form (Carston, 2002). But even in the case of explicature, context or background matters, as can easily be illustrated with pairs like Did you have breakfast? versus Did you have sex? While the former question suggests the explicature [today], this explicature is not so easy to obtain with respect to the latter question. Thus, even in the case of explicatures, a future experimental story design calls for the integration of contextual knowledge.

Default versus Context-driven view: The strict opposition between these approaches may turn out as very simplified. Interestingly, Breheny et al. (2006, p. 458) discuss an interactive account that “would have to allocate a circumscribed role for structural factors in addition to contextual factors.” While this is certainly one important aim of PM theory, it goes without saying that PM theory does not include a model of sentence-processing. RT, in contrast, sometimes does not seem interested in the genuine grammatical properties of implicature-triggering devices. I think that experimental designs building on a careful attempt of controlling contextual factors as well as structural and lexical factors that are inherent in stories could be a help in bridging the gap between models aiming at cognitive processing and models that respect language architecture.

5. Conclusions

Pragmatic evidence is about interpretations of utterances in contexts. Therefore, pragmatic research cannot do without going into the question what a context is. While the invention of (more or less fanciful) stories still plays a role in standard pragmatic argumentation, it appears that even in experimental pragmatics stories are an important part of methodology. If context is reduced, participants tend to construe a fitting context, thereby drawing on their experience as speakers and hearers. If context is enriched it can be shown that participants are sensitive to features of the context. Story design, then, is important for experimental pragmatics, and it is to be hoped that future pragmatic research shows us in more detail how contextual information condensed in stories influences our interpretations.

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References


Further reading