<<172>>

8 Joking apart

In this chapter, we will focus on scientists' humour and on its connections with other elements of scientists' discourse. We will pursue the joint aim of extending the scope of our analysis to cover a component of scientific culture which has largely escaped the attention of sociologists, and of using this analysis to furnish a check on some of our earlier conclusions. In the examination of scientific humour which follows, we will discuss examples from the scientific research 'community' at large. As a result, we will be able to show that our previous analysis, although based on a limited range of data obtained from a single research network, provides new insight into discourse generated by scientists in quite different fields.

Humour as a sociological topic

Participants' published reflections about the existence of humour in science frequently emphasise that science is a very serious business, but that, nevertheless, science actually contains and should contain a strong humorous undercurrent. In such reflections, it seems to be taken for granted that non-scientists are largely unaware of the importance of humour in science.' It is perhaps necessary for us, therefore, to begin by making two similar points: first that, despite appearances to the contrary, there is a pronounced humorous element in scientific culture; and secondly, that scientific humour is a particularly significant site for sociological analysis.

The regular and organised production and dispersal of scientific humour can be easily documented. For instance, many research laboratories produce humorous magazines. The members of the Sir William Dunn Institute under Gowland Hopkins produced a comic journal[2] every year between 1923 and 1931. An earlier example, also from Cambridge, is the *Post-Prandial Proceedings of the Cavendish Physical Society* in the J. J. Thomson era. There are, in addition, three famous Festschrifts for Niels Bohr issued by the Institute of Theoretical Physics, Copenhagen, in *1935, 1945* and *1955,* under the title *Journal of Jocular Physics*. In more recent times, scientific humour and irony have become

<<173>>

institutionalised in several 'joke journals'; the *Journal of Irreproducible Results,* the *Worm Runners' Digest, the Journal of Insignificant Research,* the *Subterranean Sociology Newsletter* and the *Revues of Unclear Physics*. The first four of these are described and discussed in a review by Garfield.[3] Furthermore, several varied collections of scientists' humour have been published[4] and a paperback containing cartoons from *American Scientist* is currently available to the general public.[5] There is also the widespread use of visual jokes in scientific textbooks, which we have already noted; and students in search of further light relief can now obtain a complete Introduction to Biochemistry written in verse and set to music.[6]

It is clear, then, that scientific culture is by no means entirely serious. But even if humour does occur regularly in all the main realms of cultural production in science, that is, in the laboratory, the research and teaching literature and the popularising media, it is still possible to

question whether there is much to be gained by studying it. One might respond with the view that humour is unlikely to tell us anything interesting about the serious side of science and that the study of scientists' humour is, therefore, an analytical irrelevance; except in so far as humour is an interesting topic in its own right. However, we wish to advance an exactly opposite view. We suggest that scientists' humour, and indeed humour generally, is a crucial sociological topic7 and that the study of humour can play a central part in putting our kind of sociological analysis to the test. Let us clarify this claim.

One of the major conclusions of the general literature on humour is summarised in the following quotation.

> Most of the theorists I have cited (as well as those not quoted here) agree, once allowance is made for different ways of putting things and different emphases, that a necessary ingredient of humour is that two (or more) incongruous ways of viewing something (a person, a sentence, a situation) be juxtaposed. In other words, for something to be funny, some unusual, inappropriate, or odd aspects of it must he perceived together and compared.8

This description of the basic structure of humorous discourse can be linked in a very simple and direct fashion to the analytical approach adopted in this book. We have proposed that scientists, like other social actors, regularly employ divergent repertoires to construct versions of their social world which often appear to be literally incompatible. In most circumstances, we have suggested, these repertoires are kept separate or are applied to distinct social categories. As a result, obvious interpretative inconsistency is kept to a minimum in ordinary, serious writing and conversation. However, inconsistency or incongruity seems to be a

necessary, or at least a very frequent characteristic of humour. Much humour seems to depend on precisely the intimate juxtaposition of, and sudden movement between, divergent interpretative frameworks. We would expect, therefore, that, in constructing humorous incongruity, participants will often draw on recurrent interpretative repertoires which are normally kept apart.

It seems to follow that if our prior analysis of scientific repertoires is broadly correct, and if these repertoires are widely used among research scientists, we will find them regularly juxtaposed in scientists' humorous and ironic formulations, and their potential incompatibility emphasised. We suggest that this is, in fact, the case: humour constructed by scientists for other scientists is often accomplished by combining and contrasting the empiricist and contingent repertoires. Moreover, contextual differences between formal and informal discourse, and recurrent interpretative patterns such as that of asymmetrical accounting for error, are treated by participants as topics for ironic comment. In addition, Trubshaw's dilemma reappears in terms of verbal, as well as visual, humour. In short, the relevance of our preceding analysis to naturally occurring discourse in science is amply confirmed by the study of scientists' humour.

On several occasions in previous chapters we have already observed instances of scientists' humour which depend on the juxtaposition of normally discrete interpretative repertoires. In the last chapter, for example, we saw how elements from the lay world of comic strips were combined in picture IX with elements of technical scientific discourse to create humorous

incongruity. A more subtle example occurred in chapter four and is reproduced again below.

> 4H
> 1 There are lots of things you have to take into account. 2 And there are very strong individuals in the field who want to interpret everything in terms of their theories. 3 Of course, those are the other guys, not us. 4 We're interpreting it even, balanced *[general laughter]. 5* The other ones are the ones who are doing that. 6 When you try and bend the data like that sometimes you don't take into account everything, too. [Hargreaves, 51]

In this passage, the speaker ironicises[9] his own account of others' errors by his tone of voice in sentences three to five. As he changes his style of delivery, he suddenly switches from a straightforward, internally consistent account of error in asymmetrical empiricist terms into a different interpretative framework. By his ironic tone of voice, the speaker draws attention to the possible partiality of his own account, thus acknowledging implicitly the existence of the recurrent pattern of asymmetrical accounting for error, and to the possibility that his own

scientific claims could be taken to be as questionable as those he is criticising. As he juxtaposes and moves between the empiricist and contingent repertoires in this passage he generates laughter along with interpretative inconsistency. The ironic tone of voice enables the speaker to do this without any lexical or structural changes in his discourse by instructing the hearer to carry out the necessary alterations in meaning for himself.

This example illustrates how a scientist can construct humour informally by moving between the two repertoires identified in our earlier analysis. At the same time, the speaker's joke is made possible by an implicit recognition of the frequent occurrence of an interpretative pattern which we have called asymmetrical accounting for error. Thus this humorous passage provides indirect evidence of the regular appearance of that pattern in participants' discourse. It also indicates that humorous incongruity is likely to be disregarded and 'not taken seriously'. For not only does the speaker return without hesitation in sentence 6 to an empiricist account of others 'bending the data like that', but the interviewers also pay no further attention to the inconsistencies implicit in the speaker's ironic aside. Although when the interview tape was being transcribed we noted that sentences 3 to *5* were 'said ironically', at the time of the interview we simply joined in laughing at the suggestion that there might be competing versions of participants' actions and moved immediately on to other topics. There is an indication here, then, that humorous incongruity is more likely to be bracketed and treated as inconsequential than other forms of interpretative inconsistency.[10] In this respect, humour may resemble the TWOD in enabling speakers to move between repertoires and to draw attention to the existence of incompatible accounts, without thereby jeopardising their ability to reinstate one version over others and to treat the supposed coherence and consistency of ordinary serious discourse as unproblematic. If one focuses on the interpretative incongruities built into a humorous remark, the speaker can always respond with 'I was only joking'. This further strengthens the view adopted in this chapter that significant interpretative discontinuities, which are not easily visible in serious discourse, will often be revealed in humorous texts and informal jokes.

Interpretative repertoires and the proto-joke

We do not intend to offer here an analysts' definition of humour. We will instead take for granted that for participants there is a close family resemblance between verbal exchanges which lead to laughter, spontaneous witty remarks, formalised funny stories, written satire and

<<176>>

cartoons. We will assume that participants use the term 'humour' to refer to all such discourse and we will identify particular instances by observing how they are categorised by participants. From this point on, we will concentrate on examples of humour which are widely available in written form and which are widely recognised as humorous in science.

Our first example, which has no storyline, no description of supposed events and no comic resolution, we refer to as the 'proto-joke'. We came across this proto-joke in the course of visiting biochemistry laboratories to carry out interviews. We first noticed it pinned on a laboratory notice-board. We smiled, but did not recognise its significance. Later, when its analytical importance became clearer to us, we began to ask biochemists whether they were familiar with it. Many of them were and we were able to obtain copies from four different research groups. They are all very similar and appear to derive from a book published in 1962,[11] which in turn makes use of material published several years earlier. The proto-joke consists of two lists of phrases, one referring to formulations which can be used in the formal research literature and the other supplying their informal equivalents. The lists are given titles like 'A Key to Scientific Research Literature' or 'Dictionary of Useful Research Phrases'. The version below reproduces some of the more popular items in our collection.

8A

What he wrote	*What he meant*
(a) It has long been known that.. .	*I haven't bothered to look up the reference.*
(b) While it has not been possible to provide definite answers to these questions . . .	*The experiment didn't work out, but I figured I could at least get a publication out of it.*
(c) The W-PO system was chosen as especially suitable . . .	*The fellow in the next lab had some already prepared.*
(d) Three of the samples were chosen for detailed study . . .	*The results on the others didn't make sense and were ignored.*
(e) Accidentally strained during mounting ...	*Dropped on the floor.*
(f) Handled with extreme care throughout the experiment...	*Not dropped on the fl6or.*
(g) Typical results are shown . . .	*The best results are shown, i.e. those that fit the dogma.*
(h) Agreement with the predicted curve is:	
Excellent	*Fair*
Good	*Poor*
Satisfactory	*Doubtful*
Fair	*Imaginary*

<<177>>

(i)	Correct within an order of magnitude ...	Wrong.
(j)	Of great theoretical and practical importance . . .	Interesting to me.
(k)	It is suggested that . . . it is believed that . . . it appears that	I think.
(I)	It is generally believed that . . .	A couple of other guys think so too.
(m)	The most reliable results are those obtained by Jones . .	He was my graduate student.
(n)	Fascinating work . . .	Work by a member of our group.
(o)	Of doubtful significance . .	Work by someone else.

When we discussed with biochemists lists like that reproduced as example 8A, we were told that they were meant to be humorous. One of our donors wrote of his list that 'It has been posted on the board in my office for some years now and many people have been amused by it.' We want to ask: 'What makes it funny? How is the humour produced?'

In the first place, it is clearly produced by drawing on our two interpretative repertoires. The phrases under 'What he wrote' are organised in terms of the empiricist repertoire and those under 'What he meant' in terms of the contingent repertoire. The empiricist phrases present scientists' research actions as impersonal (j to o), as following from procedural rules (c, d, g), and as allowing the facts to speak for themselves (c, d, f to i). But these phrases are translated into the informal idiom of scientific talk in a way which undermines their implicit conception of scientific action. Impersonality is replaced with personal commitment (b, d, g, j, k) and the influence of social relationships is stressed (c, 1 to 0). Similarly, the procedural rules of scientific investigation are depicted, not as determining scientists' judgements, but as being used by scientists to further their own knowledge-claims and their own interests (g to j, m to o). In general, the formal phrases of the research literature are reinterpreted to reveal the contingency of scientists' actions (c, e, f) and the contingency of their claims about the natural world (a, b, d, g to o).

This form of scientific proto-joke, then**,** achieves incongruity by contrasting repertoires in the most direct fashion. The long list of phrases, the continuation dots at the end of each formal phrase and the absence of any specific speaker all tell us that these are not isolated, idiosyncratic turns of speech, but that they represent distinct, coherent linguistic styles. The proto-joke is textually organised as a joke about interpretative repertoires. In scientists' informal talk, as we have seen, these repertoires

<<178>>

are usually kept separate or they are reconciled by the use of appropriate interpretative devices. In this joke, however, they are brought together in a way which emphasises their incompatibility. We are told that this is what scientists *wrote* about their actions when they were constructing research reports, but it is not what they *meant*. The phrases of the contingent repertoire are

presented as if they conveyed a literal description of what really happened. Incongruity is thus created in a way which favours the contingent perspective. As a result, it is the empiricist version of scientific action which is made to appear inappropriate and misleading. The text is organised in a manner which makes us laugh or smile at the foolishness or hypocrisy of the formal literature. The proto-joke comes close to being a satire directed at the official discourse of science.

The existence of various kinds of interpretative repertoire in science receives further support from the frequency with which scientists' jokes are constructed along the same lines as the proto-joke. There is, for example, the 'Do-it-yourself *CERN* Courier writing kit' which provides the reader with batches of numbered standardised phrases dealing with topics of relevance to CERN.12 Readers are recommended to take 'any four-digit number . . . and compose your statement by selecting the corresponding phrases from the following tables. . .' There are numerous jokes which deal in this fashion with the existence of localised or contextualised repertoires. Of most direct interest to us here is the 'Conference Glossary' first published in 1960.13 This is very close to the proto-joke in consisting simply of two lists of phrases likely to be heard in formal conference sessions. The lists are headed 'When they say', and 'They mean'. Their content is very similar to that of 8A. For instance, 'We have a tentative explanation' is translated as meaning 'I picked this up in a bull session last night.' This is a further indication that the two forms of accounting identified in our analysis do appear in naturally occurring interaction among scientists.

Sociologists of science have been inclined in recent years to organise their own analysis of scientific action in a manner similar to that found in 8A; that is, they have used scientists' contingent accounts as evidence for their own contingent interpretations of social action and belief. In contrast, philosophers have been more inclined to treat the formal literature as primary and to discount the contingent element in scientific action. We wish to emphasise that scientists themselves can and do adopt either perspective, depending on the kind of interpretative work in which they are engaged. Thus scientists employ the empiricist repertoire when writing research papers. When justifying their own scientific views informally they may use both repertoires, but they will usually treat the empiricist repertoire as primary. The same individuals, however, may

favour the contingent repertoire when providing an explanation of false belief, when describing laboratory practice, when making a joke or when satirising the research literature. Neither repertoire provides the analyst with literal descriptions of events occurring in the research community. Rather the two repertoires must be seen as interpretative resources which are used by scientists to construct versions of events appropriate to varying interpretative contexts.

This section has shown that our previous analyses of scientific discourse provide insight into the way in which scientific humour is organised. Example 8A depends on the existence of divergent repertoires, on the gap between the formal literature and informal talk about science, and on the possibility of generating humorous incongruity through the characterisation of given actions in incompatible ways. Let us now move on to examine another kind of humorous product, the satirical research article.

Satire as a form of scientific discourse

The *Journal of Irreproducible Results* is described on its cover as a 'satire of interest to professional and scientific workers'. Many of the contributions to the JIR appear to make much use of irony, that is, they use words to convey the opposite of their usual meaning. In the course of conversations, irony can be conveyed by means of gesture, emphasis or tone of voice, as it was in 4H. In written texts, however, this is not possible and various kinds of clues are normally built into the textual structure to indicate that it should not be accepted at face value. This can be observed in example 8B, which is the full text of an article in the *JIR*.

8B *Dose-Response Curve to Oral Lactose in Spontaneous Hypertensive Rats*

Abstract

1 Goodman and Gillman have not included lactose in their 8th revised edition of *The Pharmacological Basis of Therapeutics*. 2 In other well known reference sources we found the same dearth of information. 3 Following a computer library search we failed to find any study where a lactose dose-ranging study was reported, which is standard result for a computer search. 4 This paper reports the effect of 'no-treatment' in comparison with that of 0.5, *5* and SO mg/kg of lactose on the mean arterial pressure (MAP), and heart rate (HR) of slanted-eyed spontaneously hypertensive rats (SHR).

Materials and methods

5 Male rats of 290 to 350 g body weight and 30 to 35 weeks of age were purchased from Rats Incorporated, Wilmington, Delaware. 6 The

<<180>>

modified* tail cuff method was used to indirectly record the systolic blood pressure. 7 Twenty-four rats (6 per group) were placed in restrainers and kept at room temperature (27°C) and had free access to water ad libido. 8 The systolic blood pressure from each rat tail cuff was recorded six at a time on a Hewlett-Packard 7754A four-channel recorder coupled to a Sansui Quadraphonic Receiver. 9 Control readings were made hourly for four hours at the same time of the day for four days before treatments. 10 Following oral administration of the lactose solutions (group **II,** III, IV) or no treatment (group I), the same recordings of the MAP and HR were made on the four days of treatment. 11 A one-day post-treatment period was also taken to establish if recovery had occurred.

Results

12 The effect of lactose on systolic pressure in groups of six rats measured indirectly (tail plethysmography), indicated that no dose-response relationship was obtained but lactose at 50 mg/kg, (group IV) significantly lowered ($p<0.05$) the systolic pressure by an average of 3 mm Hg and significantly increased the HR ($p<O.05$) in the same group, by an average of4 beats per minute. 13 The effect occurred 1 and 2 hours post-drug on Day 1 but disappeared thenceforth. 14 MAP and HR were back to control levels in all groups from the second hour on and remained at approximately the same level during the post-treatment day.

Discussion

15 The indirect tail cuff (tail plethysmography) has been reported to overestimate systolic blood pressure. (Personal communication.) 16 If this is the case in our experiment, we must give consideration to the possibility that lactose may be more hypotensive than our data would suggest.

17 In order to verify this we are presently conducting a similar experiment using the direct (aortic cannula) method.

18 In conclusion, we state that 50 mg/kg of lactose p.o. appears to have a short depressing effect on the MAP in SH rats and we urge all those who have used this treatment as a placebo in their study of hypertension to reconsider the validity of their data.

*The cuff lining is made of cat fur to add to the stress (manufacturer's brochure).

Let us describe some of the structural features of this text. In order to avoid being unnecessarily clumsy, we will sometimes use conventional phrases like 'the author provides' or 'the author is certain that'. Such phrases should not be read, however, as referring to the author's intentions, but as referring to features of the text. Thus, to assert that 'the author provides indications of humorous intent' is not intended as a claim about the author's actual intentions, but as a statement about certain

interpretative elements in the text. Nevertheless, we did obtain brief comments on our analysis from the author. These will be mentioned parenthetically as author's readings of the text.

We suggest that the author provides clear indications of humorous intent early in the paper. The second part of sentence three, suggesting that computer library searches are usually worthless, although acceptable as an informal comment, would not normally be found in the formal literature. The early introduction of this phrase from informal discourse quickly generates a modest incongruity.

[Author's reading: The paper was written somewhat in jest at a time I was with Merck & Co. Annoyed at being given second-rate projects to work with which did not lead to publication I decided to write the *JIR* paper: at least I would have a publication that year! Furthermore, I wanted to show some of my colleagues with a high opinion of themselves that everything had not been said about hypertension. There is also a little dart at literature search: I have always done better by myself than the computer.]

A second clue that the text is ironic is provided towards the end of sentence four, where the 'spontaneous hypertensive rats' of the title are described as 'slanted-eyed'. Nevertheless, this 'clue' is by no means unambiguous for the non-specialist. There is nothing in the text to tell those who have no dealings with experimental rats whether or not such slanted-eyed creatures exist or whether, if they do exist, they have well-known experimental advantages.

[Author's reading: The 'slanted-eyed rats' statement was 'my way of referring to a Japanese strain of rats known as the Okamoto-Aoki strain which has been bred to develop spontaneous hypertension'.]

Perhaps a more significant feature of the paper's abstract is the fact that there is no mention at all of the actual experimental findings. A brief summary of the results is, of course, a normal feature of abstracts in the serious literature. The ironic implications of its absence become clear

only after we have read the whole paper and have realised that there are no findings.

The methods and materials section is the most explicitly humorous part of the article. The picture is conveyed of these groups of six slanted-eyed rodents being plugged by their tails into what reads like a hi-fl system, with cat fur being added to the equipment to increase the stress. The impression of incongruity is strengthened when it is noted that stress would tend to raise the animals' blood pressure and thereby interfere in an uncontrolled manner with the observed effects of lactose on MAP. Thus the materials and methods section creates two kinds of incongruity. Not only are various details of the experiment bizarre, but, even if such details are

ignored, the overall research design seems to be scientifically flawed. In the results and the discussion sections, the humorous content is less

obvious. However, sufficient clues of humorous intent have already been provided to encourage us to look for a double meaning behind the empiricist terminology of these sections. The data are presented and discussed in the apparently straightforward terms of the formal literature and with no further attempt to convey comic images. Yet these two sections are the most firmly ironic of the whole text, for there are actually no results; certainly insufficient results to add to existing knowledge of the physiological effects of lactose. Thus the paper becomes a satire on how scientists try to present trivial observations as if they were scientifically valuable.

The basis in the text for this conclusion can be seen most clearly by comparing the title, which proclaims that the paper contains a 'dose-response curve to oral lactose', with sentence 12, which states explicitly that 'no dose-response relationship was obtained'. The 'results' obtained in this imaginary experiment can be summarised in the statement that, over a period of nine days, the blood pressure and heart rate of one group of animals departed from the average for a period of up to two hours immediately after the start of the experimental treatment. There is, therefore, no dose-response curve at all, but merely a single, isolated departure from the normal. The author claims to be 95 per cent certain that this fluctuation was not due to chance. But whether it is replicable and whether it is a side-effect of the experimental situation are left quite unclear.

Three of the four sentences of the discussion, instead of offering some tentative explanation of positive results as is normal in Discussion sections, focus on the *failure* to produce any experimental evidence of the supposed relationship between blood pressure and oral lactose. Sentence 15 makes use of a 'personal communication' to suggest that the technique of measurement employed in the experiment systematically under-represented the real empirical effect of lactose. The author uses this communication, which of course cannot be checked by the reader or by the referee, to reaffirm the claim embodied in the title of his paper. In sentence 16 he maintains that, if his measurement technique *was* defective, the relative insignificance of the findings is perhaps misleading. In other words, the failure to obtain positive results *with this technique* has now been made to appear to be exactly what one would expect. Another effect of the personal communication is to make this experiment worthless, because it reveals that the techniques employed do not properly measure the variables they are supposed to measure. But the author does not develop this implication. Instead, in sentence 17, he uses his initial

<<183>>
experimental 'failure' as a basis for justifying a new study, the purpose of which is to describe that dose-response curve which was to be the subject of this article.

The final sections of this paper, then, reveal it to be an ironic gloss on the second pair of phrases given in 8A: namely, 'While it has not been possible to provide definite answers to these questions . . .' and 'The experiment didn't work out, but I figured I could at least get a publication out of it.' There is also a pronounced reference to 8Ah: 'Agreement with the predicted curve is fair/imaginary.' Thus this text can be interpreted as an elaboration on specific components from the two repertoires discussed above. This is not immediately obvious from a first reading. But we can now see it as a strongly ironic text which is organised, like the proto-joke, to bring out the supposedly contingent character of many serious scientific knowledge-claims and to reveal how scientists can employ the formal mode of discourse to attempt to hide this contingency.

Because the author of this paper has to provide indications of ironic intent in his text, this spoof paper can do no more than resemble proper research articles in certain formal respects. It is implied, nevertheless, that the construction of serious papers in the formal literature differs from that practised here only in the sense that interpretative clues will not be emphasised and the deceptive hiding away of contingency will be that much more effective.

[Author's readings: 'Your perception of my article is accurate. . . Your article is more universal than mine.']

It is interesting to note that in both the proto-joke and in this ironic article, the contingent repertoire is treated as primary. In 8B, of course, the contingent repertoire is no more than hinted at in the text. Nevertheless, it is possible to read the text as ironic only by contrasting the ostensibly empiricist version of actions and conclusions which it offers in the last two sections with some informal account of 'what really happened in the lab and what the results really mean'. Thus, in order to display the text as ironic, we were obliged to offer above an informal account of 'what the results actually were', which was based on the content and structure of the text, but which was nowhere fully explicit in that text.

Some kind of extraction of an alternative version from the text is unavoidable in cases of irony, because the point of irony is to keep largely implicit the juxtaposition of those incongruous perspectives, repertoires or versions of events on which the humour depends. We have tried to show that the article above is organised to suggest an alternative version of the author's actions and results in the terms of the contingent repertoire. We have also tried to show that it is a concrete exemplification of one of the themes contained in the proto-joke; and that its ironic structure can be

<<184>>
understood in relation to the two repertoires of discourse embodied in the proto-joke.

Scientific and non-scientific humour

We suggested at the beginning of this chapter that humour is a critical topic, not just for the sociology of science, but generally for any systematic sociological analysis of discourse. In this section, we will discuss a joke taken from an area of social life far removed from the research

community. Our aim is to show that the relationship which we have observed in our material between recurrent interpretative patterns and the structure of humour is not unique to science or to our collection of data.

The joke with which we are concerned is as follows:

8C

Doctor: I've got good news for you, Mrs Brown.
Patient: It's Miss Brown, actually.
Doctor: I've got bad news for you, Miss Brown.

This joke is taken from MacIntyre's analysis of what she calls, following Mills, the vocabularies of motives for dealing with pregnancy in modern Britain.[14] She suggests that there are two main vocabularies in use, two 'versions of reality' as she puts it at one point, each of which is linked to a distinct social category. She shows how doctors, nurses, and social workers, whilst regularly professing that reproduction is 'natural, normal, and instinctive' for women generally, systematically provide 'different sorts of accounts' for the responses and motives of unmarried as compared with married women. There is, then, considerable similarity between, on the one hand, our identification of two interpretative repertoires in science and their application to different social categories in accounts of error and, on the other hand, MacIntyre's analysis of accounts of pregnancy.

The experience of pregnancy for persons defined as 'married woman' is given meaning in terms of a repertoire with the following main features:

(1) Pregnancy and childbearing are normal and desirable, and conversely a desire not to have children is aberrant and in need of explanation.
(2) Pregnancy and childbearing are not problematic, and to treat them as such indicates that something is wrong.
(3) Legitimate children with a living parent should not be surrendered for adoption or taken from the mother, as this would occasion too much distress for the mother.
(4) If a couple is childless it is clinically advisable that they receive diagnostic attention and, if necessary, treatment for infertility.
(5) It is clinically advisable on occasion to advise a woman to have a child.

<<185>>

(6) The loss of a baby by miscarriage, stillbirth, or neonatal death occasions instinctive deep distress and grief.15

In contrast, a quite different interpretative repertoire is applied to persons categorised as 'unmarried woman'.

(1) Pregnancy and childbearing are abnormal and undesirable and conversely the desire to have a baby is aberrant, selfish, and in need of explanation.
(2) Pregnancy and childbearing are problematic, and not to treat them as such indicates that something is wrong.
(3) Illegitimate children should be surrendered for adoption and a mother who wants to keep her child is unrealistic and selfish.
(4) Diagnostic attention and treatment for infertility is not clinically advisable or relevant -

unless the woman is about to get married. It is not proper for her to adopt a child.

(5) It would be most inadvisable and inappropriate clinically to advise a single woman to have a child.

(6) The loss of a baby by miscarriage, stillbirth, or neonatal death should not occasion too much grief or distress, and may even produce relief.[16]

These contrasting pregnancy repertoires resemble the repertoires observed in science in that, in both cases, distinct forms of interpretation are available which appear to express opposed interpretative principles, which on occasion generate problems of interpretative inconsistency, but which are on the whole used successfully by participants to construct interpretations of social action which are adequate for practical purposes. These pregnancy repertoires, however, are likely to be more generally available than those we have identified in science. They are, for example, part of the linguistic potential of pregnant women themselves and they are probably available to all linguistically competent members of British society. It is presumably this familiarity with the two basic pregnancy repertoires and with their varying relevance to the categories 'married and unmarried woman' which enables (most of) us to read 8C as a joke about an unmarried pregnant woman. For, although few readers are likely to fail to 'see the joke', no mention is actually made of pregnancy'.

The implicit character of the joke strengthens our confidence in MacIntyre's overall analysis, because it shows clearly that the topic of pregnancy is recognisable solely from the use of standardised phrases from the pregnancy repertoires, that is, the phrases 'good news' and 'bad news', along with the redefinition of the patient which is revealed by the replacement of 'Mrs Brown' with 'Miss Brown'. It is precisely our own familiarity with the discursive regularities documented systematically by MacIntyre that enables us to read the joke as a joke about pregnancy'. And

it is the sudden switch from one interpretative repertoire to another which creates the incongruity essential to humour.

MacIntyre's analysis supports our own in several respects. It shows that interpretative repertoires can be discerned in areas of social life other than science'. It also shows that such repertoires can provide the raw material for non-scientific as well as scientific jokes. In addition, it further confirms that analytical conclusions about serious discourse can be checked by an examination of naturally occurring humour and therefore that humour, rather than being a sociological frivolity, is a topic of critical sociological significance.

Humour and the real social world

In one respect, it is clear that humour is a topic which is particularly amenable to analysis in terms of repertoires of discourse'. For much humour deals with forms of word-play about an imaginary world involving people and events which do not exist outside the setting of the joke'. Sociologists of science, of course, have customarily been concerned with scientists' words only as a source of information about their *real* actions and their *actual* beliefs. Not all humour, however, deals with imaginary events. Sometimes it takes 'the real social world' as its subject.

Particular people and their actions can be *made to appear funny*. Maclntyre's study, for example, shows that events very similar to that represented in the pregnancy joke do actually occur. Clearly, an event of this kind can just as easily be portrayed, not as humorous, but as pathetic or distressing. Whether it is laughable or upsetting depends on the telling; and this will vary with the occasion and the participants involved'. As we have seen above, humour is created when participants' accounts of action and belief are appropriately organised. Even when actual events are being used as resources for humour, its successful accomplishment depends crucially on the way in which the speaker's version of events is constructed.

Humour, then, is not a characteristic of events in themselves, but is an outcome of the ways in which participants portray and organise their versions of events in the course of social interaction. Participants treat as humorous those interpretative products which have recognisable kinds of structural characteristics; and they produce humour by organising their accounts of action so as to display these characteristics'. We have tried to identify above some of the characteristics of scientific humour by examining examples of scientists' humour which have no direct connection with specific events. We suggest, however, that these conclusions are likely to apply equally to humour which is more closely

based on actual events. Further study will, of course, be needed to establish this point more firmly.

If this argument is tentatively accepted, we are led to ask whether there is any difference *in principle* between the social production of humour and the social production of, say, consensus, refutation or controversy'. In other words, are the phenomena traditionally investigated by sociologists and philosophers of science best conceived, like humour, as aspects or outcomes of the interpretative devices used by scientists to organise their versions of events? Is a controversy analytically different in this respect from a joke? Are the participants' statements used by the analyst to identify and interpret a controversy any less a members' interpretative and context-dependent achievement than is a joke? If the answer is that they are no different in this respect, it appears that we should carry out systematic analysis of traditional topics in the same way that we have begun our analysis here of humour; that is, we should attempt to describe the interpretative procedures used by participants as they construct the discourse through which recognisable social meanings are achieved. This is exactly what we have tried to do in the main body of this book.

Participants themselves, of course, sometimes distinguish between their literal descriptions of social action, which can ostensibly be accepted by the analyst at face value, and the interpretations of action they have devised for specific contexts. For instance, they may compare the versions of action and belief they have produced for the formal literature with their informal, contingent accounts of 'what really happened in the lab'. But such a distinction between literal and constructed versions cannot be adopted by the analyst. For participants treat different versions as literal on different occasions and in different contexts. In other situations, for instance, they will give their formal, empiricist version of events interpretative primacy and treat their everyday, contingent accounts as irrelevant.

There appears, therefore, to be no difference in principle between participants' production of serious discourse and their production of humour'. Participants' organisation of humorous

discourse is simply one aspect of their ability to construct diverse interpretations of their social world. However, humour is a crucial sociological topic because it involves participants in drawing on their interpretative resources to create, and indeed to celebrate, the kind of discursive variability which, in serious discourse, is largely hidden from the casual observer by the use of reconciliation devices and by the separation of interpretative contexts.