PART

I

Setting the Scene: Who Did What, and Why

CHAPTER

1

Some Preliminaries

Before you start reading a paper, you could usefully ask one or two questions which help set the work in context:

- Who wrote the paper?
- In what sort of journal does the paper appear?
- Who (and what) is acknowledged?

WHO WROTE THE PAPER?

Often, one person writes an article such as a review or an editorial. This is less common for papers describing the results of a research study. Because most research is a joint enterprise, papers describing research studies are usually published under the names of a number of people – the research team. From the list of authors, you can tell:

- *The range of expertise of the research team.* Professional backgrounds of the authors (and sometimes their level of seniority) are often included, with the address of each.
- *The research centre or centres involved in the study.* This is useful when you've been reading for a while and you know whose work to look out for – for whatever reason!
- *The principal researcher.* He or she is often named first, or sometimes identifiable as the only author whose full address and contact details are listed (called the corresponding author).

Figure 1.1 shows a typical example of a research project which required a collaborative effort.

The list of authors may be quite long. The more people involved with a study, the less likely it is that one of them has a pre-eminent position, so there may be no principal author. The authors may simply be listed in alphabetical order.

When a large study involving many sites is published, it may be that the work is written up by a small team, on behalf of the larger group. You may then find that there are no named authors, or only one or two, and the rest of the team is listed elsewhere – as in Figure 1.2. This type of multiple authorship is unavoidable if everybody is to get credit for participating in large studies.

An undesirable form of multiple authorship arises if members of an academic department attach their names to a paper when they had nothing to do with the study. This is sometimes called 'gift authorship', although it isn't always given very freely. To try to stop this practice, many journals now expect each author to explain exactly what part he or she has played in the study. For this, and other useful information, you should turn to the Acknowledgements at the end of the paper.

Understanding Clinical Papers, Third Edition. David Bowers, Allan House, David Owens and Bridgette Bewick.

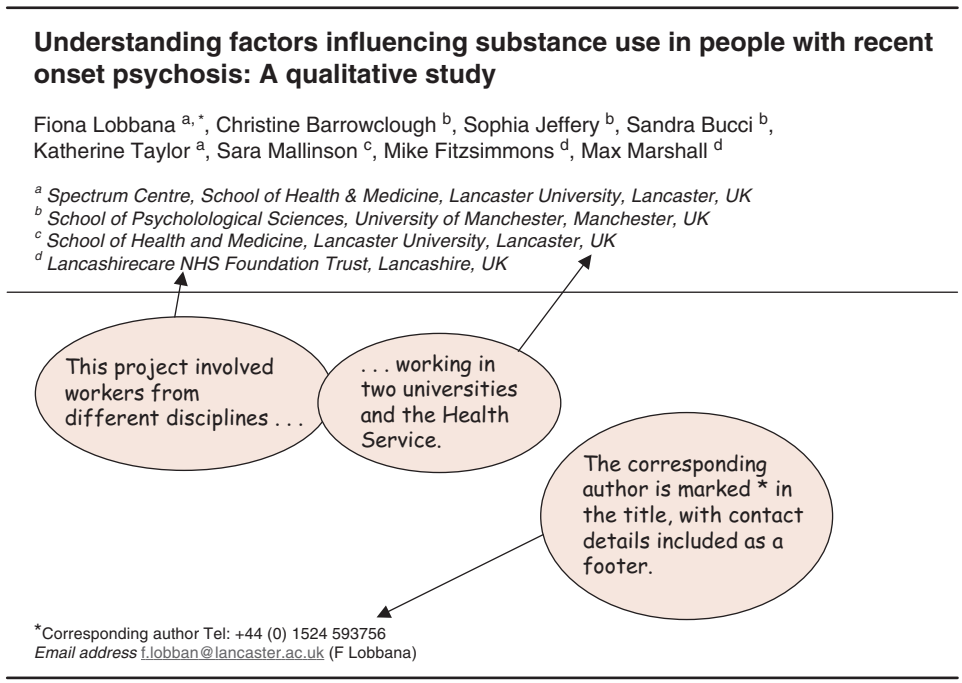

FIGURE 1.1 Authors and research centres listed at the start of a research article. Reprinted from Lobbana F, Barrowclough C, Jeffery S, Bucci S, Taylor K, Mallinson S, *et al*. Understanding factors influencing substance use in people with recent onset psychosis: a qualitative study. *Social Science & Medicine* 2010, 70 (8): 1141–7, © 2010, with permission from Elsevier.

IN WHAT SORT OF JOURNAL DOES THE PAPER APPEAR?

Not all journals are the same. Some are mainly aimed at members of a particular professional group, and therefore include political news, commentaries, and personal opinions. Others publish only research articles which have not appeared elsewhere, while some aim to mix these functions.

In some journals, the letters pages are designed to allow readers to express their opinions about articles which have appeared in previous issues. In others, the letters pages contain only descriptions of original studies.

What appears in a journal is decided by the Editor, nearly always with the help and advice of an Editorial Committee. The best journals also seek opinions from external referees who comment on papers sent to them and advise on suitability for publication. Because these referees are usually experts in the same field as the authors of the paper, this process is called 'peer reviewing'. It isn't always easy to tell whether papers for a journal are peer-reviewed, which is unfortunate because the peer-reviewing process is the best means of establishing the quality of a journal's contents. You shouldn't trust the results of any data-containing study if it appears in a journal which does *not* use the peer-reviewing system.

Some journals produce *supplements*, which are published in addition to the usual regular issues of the main journal. They may be whole issues given over to a single theme or to describing presentations from a conference or symposium. Often they are produced (unlike the main journals) with the help of sponsorship from pharmaceutical companies. Papers in these supplements may not have been reviewed by the same process as papers in main journals and for that reason they tend not to be of as high quality.

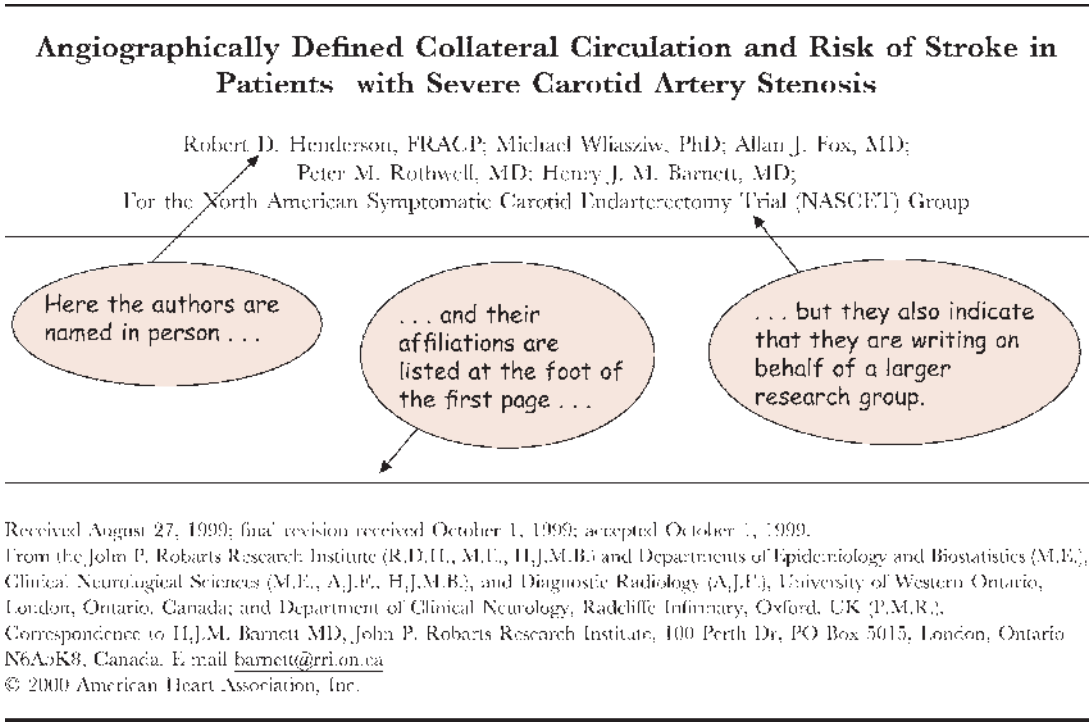

FIGURE 1.2 Authorship on behalf of a large research group. Reproduced from Henderson RD, Wliasziw M, Fox AJ, Rothwell PM, Barnett HJM, for the North American Symptomatic Carotid Endarterectomy Trial Group. Angiographically defined collateral circulation and risk of stroke in patients with severe carotid artery stenosis. Stroke 2000, 31: 128–32, with permission from Wolters Kluwer Health publising.

One way to judge the quality of a journal is to check its *impact factor* – a measure of the frequency with which papers in the journal are quoted by other researchers.* The impact factor is only a rough guide because high-quality journals that cover very specialised topics will inevitably have lower ratings than journals with a wider readership.

WHO (AND WHAT) IS ACKNOWLEDGED?

It is tempting to treat the Acknowledgements at the end of a paper as being a bit like the credits after a film – only of interest to insiders. But they contain interesting information. For example, who is credited with work, but does not feature as an author? This is often the fate of medical statisticians and others who offer specialist skills for the completion of one task in the study. If the study required special expertise – such as advanced statistics, economic analysis, supervision of therapists – then the necessary 'expert' should be a member of the research team and acknowledged. If not, then either the expert was not a member of the team or somebody isn't getting credit where it is due. To ensure that co-authorship is earned, and to guard against research fraud, the Acknowledgements in many journals now also contain a statement from each author about his or her individual contribution.

* You can check the impact factor of a journal at a number of websites, including (for example) the Thomson Reuters (formerly ISI) *Journal Citation Reports*. These are available through many Health Science libraries and websites (e.g. http://isiknowledge.com/jcr).

Gender differences in HIV-1 diversity at time of infection

E. Michelle Long, Harold L. Martin, Jr. Joan K. Kriess,
Stephanie M. J. Rainwater, Ludo Lavreys, Denis J. Jackson, Joel Rakwar,
Kishorchandra Mandaliya & Julie Overbaugh

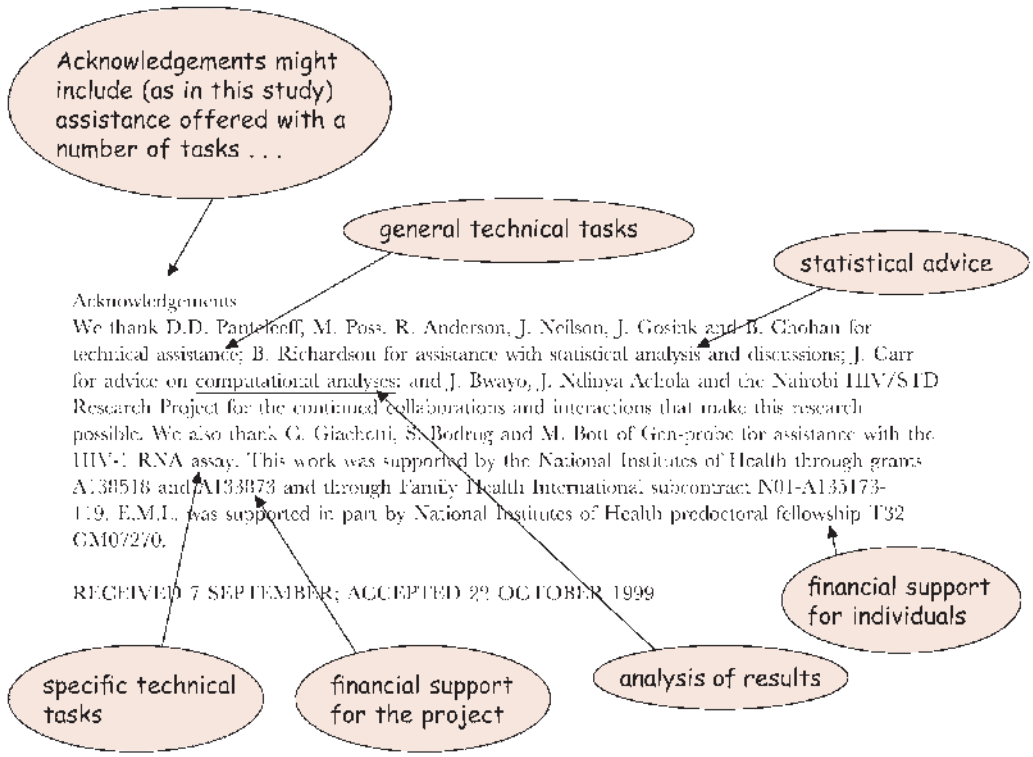

FIGURE 1.3 Acknowledgement of statistical, financial, and other support at the end of a paper. Reprinted by permission from Macmillan Publishers Ltd: Long EM, Martin HL, Kriess JK, Rainwater SMJ, Lavreys L, Jackson DJ, *et al*. Gender differences in HIV-1 diversity at time of infection. *Nature Medicine* 2000, 6: 71–5, © 2000.

The Acknowledgements section from the first paper we looked at showed what additional help the research team received (Figure 1.3). It also contains an indication of the *source of funding* that supported the research. This is of interest because external funding *may* bring with it extra safeguards as to the rigour with which work was conducted. On the other hand, it may lead to a *conflict of interest* (for example if a pharmaceutical or other commercial company has funded research into one of its own products).

Declaring a conflict of interest is *not* the same as admitting to a guilty secret. Its aim is to ensure that readers, when they are making their judgements about the study, are informed that there may be non-scientific influences on the conduct or interpretation of a study.