

# 1 Planning Research

You are reading this, which means that you have actually started your planning. Of course, you are probably *very* early in the process, but that doesn't matter. As some Chinese people say, a few drops of water are the start of a river. You might think that you are bad at planning things, just like some people think that they are bad at statistics or hopeless at football, but planning is something for which you don't require much natural talent (unlike the other two, perhaps). If you take a structured approach, and discipline yourself, there is no reason why you can't plan a great research project and see it right through to the end.

Research always requires good planning. You can't expect to make a good job of something so important as a research project unless you have worked out the details before you start. You need a map of the process, so to speak. You need to know what you are going to do, how you are going to set about it, what you will need to do it with, when you are going to do it, how long it will take, what is likely to go wrong, what you will do if it goes wrong, and who you will need to ask for help at various points on the way. Final-year projects are usually heavily weighted in calculating a student's degree classification, and so if you want to achieve the very best degree you can you should take your research very seriously. It's normally the single most important thing you will do in a psychology course, and deserves to be well planned. In this section, advice is given on all aspects of planning, from deciding what to research through to keeping an eye on the ethical concerns to which all researchers must be sensitive.

## CHOOSING A RESEARCH TOPIC

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Psychology departments differ in the extent to which students are expected or allowed to choose their topic of research. In some departments, lecturers suggest pieces of research and students can choose

from these. In others, students are given completely free rein to select what they want to research: the lecturer's job is only to advise on this, or to troubleshoot. Therefore, this particular section is only of direct use to those students (the majority of those in the UK) who have some kind of choice to make as to what research to engage in.

If you really don't know what to research, all is not lost. Waiting for an idea to pop into your head while you walk around the supermarket or take a shower is not recommended. If the ideas aren't forthcoming, anxiety is likely to set in. If you're worrying about what to do for your project, the chances are that your anxiety will block off some of your best thoughts. We've all experienced the feeling of being too busy worrying about something to actually get on with it. Rather than fret, do something productive that could help to generate ideas. Some idea-generating methods which work for most people are given here. They've helped many of my own students in the past. Try them.

### ***The textbook method***

This is a method of elimination, particularly useful when you have absolutely no idea what to research. Pick a general psychology textbook, the sort of book you might use in the early stages of your studies in psychology, with chapters on just about every area of the discipline. Look at the contents list at the front, and choose from that the areas of psychology which really do interest you. That should leave you with a few chapters of the book which you then need to look into more deeply. Read those chapters, flicking through and eliminating those sub-areas you are still not interested in. Eventually you should be left with a small list of the topics which you could conceivably do some work around. After all, you chose to study psychology, and so there ought to be some aspects of it which fascinate you! Once you have done this, try to rank the topics in order of interest to you. Take your number one topic, and read the whole section of the book which is relevant to that. Take care to read in detail about the research which has already been done in this area. At this point, some ideas should start to spring to mind. Think about ways in which you could adapt previous research. Try doing a literature search using an electronic database, and reading the most recent research in your selected area. Pay attention to the Discussion sections of the articles you are reading. Here you will actually find suggestions as to further research. Why

not consider taking up the gauntlet and pursuing one of these suggestions? You will impress your supervisor with your reading, and you'll be doing something which, in theory, could actually be publishable in itself. So, a few days' work has led you from a complete blank through to an idea for a project at the cutting edge of psychology. Not bad, eh?

## ***The television method***

It's rare for a student never to watch television. Sometimes you might feel guilty because you're sitting in front of your favourite soap rather than getting on with your work. This method helps to appease your guilt, because watching television is a form of research.

All you need is a notepad and pen to accompany you while you watch. The difficult bit comes with the fact that you have to think about what you are watching. Television is full of ideas for research. If you watch programmes which feature debate, especially of the *Jerry Springer Show* or *Trisha* type, you have a great source of material. Here you have everyday people arguing over everyday things. Ask yourself how and why. Sometimes the debate is around something quite unusual, like a non-standard family arrangement where a woman lives with two men rather than the usual one. Again, our attitudes to this kind of thing are probably worth studying.

Watch the news. Stories break all the time which can be made into psychological research. Most of the stories are directly about people. Some psychological research has been directed at studying the nature and persuasiveness of the news message in the light of the language used, the credibility of the speaker, and so on.

Watch advertisements. Why are the advertisers presenting the product in the way that they are? Is there anything unusual about the method being used? To which types of people might the advertising campaign appeal?

Watch children's programmes. If you are interested in developmental psychology, you will find a thousand ideas waiting for you. You can investigate parents' and children's opinions of various programmes, or their educational value, for example. You can look into how children's personalities may dictate their viewing preferences.

Watch comedy programmes. Good comedy relies upon a great many facets which you might like to explore. Timing is just one of them: one can easily conceive of a neat experiment where the length

of time before the punch line of a joke or witty comment is delivered is actually manipulated systematically. Imagine being able to generate a graph to show the optimal pause before making a funny comment or finishing a joke!

Watch documentaries. Some documentaries are directly relevant to psychology, some less so, but you can always find ideas there. Even ones about history or wildlife can lead to some useful research. For example, very little psychological research has been conducted into the different ways in which people view the past. Have you ever wondered why so many people have a feeling that the world before about 1950 was black-and-white? Of course, it's probably because the film footage we see from back then happens to be monochrome, but there's probably a lot to explore in those kinds of notions. Furthermore, many TV documentaries have a website where you can follow up the issues, and possibly access much more information on the issues covered in the programme.

### ***The pub chat or coffee bar method***

You have probably guessed what this is all about. Make use of those times when you hang about with friends, just chatting, whether in a bar or elsewhere. A common theme in conversation is the asking of psychological questions. Listen to people chatting. It won't be long before you hear questions like these:

- Why do people do that?
- Does anyone actually think like that?
- How does that card trick work?
- Who do you reckon wants to buy that?
- Are teen bands really promoting sexuality in young people?
- Can a leopard really change its spots?
- What makes someone want to climb a mountain?

Many of the themes which enter common conversation are worth exploring in a psychological research context. Even the dynamics of chat itself are interesting. Who talks to whom? Why? When? Not only are these things worth looking into; you'll find that other psychologists have also addressed many of these issues, so you won't be without a theoretical precedent on which to base your research.

## ***The internet method***

The internet is a strange place, but is replete with potential ideas for research. You can find out about people with unusual interests. You can access forums and bulletin boards where people discuss various issues, and you can even find lists of ideas for research, especially by seeking out the websites of academics and looking at the kinds of research they are engaged in and are often hoping to conduct in the future. Many search engines actually feature a random site button, where you will be directed to somewhere without knowing where it will be. Sometimes, you can find some fascinating things in this way.

## ***The lecturer method***

It might be the last thing some students would think of doing, but listening to your lecturers can be a very good source of ideas. They are the people at your disposal who know most about their areas, including what needs researching that hasn't been yet. Furthermore, your department is likely to also have postgraduate researchers, demonstrators, and so on. All of these members of the department might have great ideas for research. If your department puts on regular talks by external speakers, make use of that; turn up and listen, even if you think the topic might not interest you particularly. You could be surprised. If you can afford to go to a conference (student conferences are often very cheap), you will be amazed at how many ideas spring from your attendance, and just wandering around and taking in the atmosphere and talking to other people doing research.

## ***Think again!***

Although departments do differ a little in respect to ethical procedures, you should be aware that certain project ideas are usually non-starters. There is no point wasting time researching an idea only to be told that there is no way that you will be permitted to investigate that particular area of psychology.

Generally, you will not be allowed to work directly with prison inmates or ex-prisoners, especially those with a history of violent crime, paedophilia, or other sexual crime. You will not usually be permitted to access people who are mentally ill, especially those with schizophrenia or other illnesses which involve significant disorders of the thought processes. You will not be able to conduct studies which involve administering

electric shock or pain, however mild. (Pain studies are *sometimes* allowable, and your supervisor will advise.) You will not be permitted to do any research involving showing people hard-core pornography, or scenes of extreme violence, including images of real death and injury. You will not be able to conduct studies on the psychophysiology of sexual arousal, using equipment such as the penile plethysmograph. There are probably many more examples, but this list covers the main things you should steer well clear of. The earlier you can present your idea to a potential supervisor, the earlier you will get advice on how feasible your suggestion is. Your lecturers will usually not just say ‘no’, but they will try to work with your idea to shape it into something that *would* work. Don’t be afraid, therefore, of coming forward with a part-formed idea. Believe me, we prefer to talk to students with some idea than those who come along with a blank piece of paper and nothing to say!

## SELF-INTEREST

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Often students approach me with an idea for research which comes from their own experience or personal interests. This can be a great source of inspiration. For example, you might be a skateboarding expert who wants to investigate the formation of social identities surrounding the skateboarding community, or a chess player who would like to test the working memories of other chess players. If a particular issue fascinates you, you are motivated to do a great job of the research.

There are, however, some issues you should consider when pursuing a research topic stemming from a personal desire to understand some phenomenon:

- Will researching the issue bring up terrible memories or encourage a poor mood, which might affect your motivation? This could happen when you research something such as bullying, if you have been bullied yourself.
- Will your personal experiences influence the nature of your research and force you into following through only those ideas you agree with, thus meaning that you miss out on some new ideas which do not fit your own experiences?
- Will you run up against ethical problems, for example, where you wish to research anorexia nervosa because you were once affected

by it or still are? What I mean by this is that some people might argue that your own history might affect the research in some way that could be negative. A person with experience of anorexia nervosa interviewing someone else might actually become a role model for that person, for example. After all, as many qualitative researchers argue, the interviewer is sometimes in a subtle position of power and influence. It might not be very likely, but it is possible, and in considering the ethical dimensions of research we must reflect on the unlikely as well as the likely consequences.

If your honest answers to any of these questions might be ‘yes’, then you would be well advised to think of another topic to pursue. Denscombe (2002, p. 35) sums this up as follows:

*It is crucial to distinguish between the positive and healthy influence of having a personal interest in a topic which will operate to sustain the researcher through hard times, and the detrimental impact of having such a commitment and passion for a topic that the researcher approaches the area with conclusions already set in his or her mind and an unwillingness to discover what is not desired.*

If you intend to conduct qualitative research, you must be ready and willing to admit to your own personal preconceptions and experiences when you write up the research, since this is an essential part of the process of explaining to the reader the way in which you have come to your conclusions. If your experiences are necessarily private, you should think twice before taking the first steps down such a path.

## REPLICATION VERSUS NOVELTY

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Replicating a study, that is looking to see if you can achieve the same result as someone else by copying their method and analysis in detail, is something which rarely gets done these days. One reason for this is that there is great pressure on academics to publish, and great pressure on journals to publish only new and exciting studies, since space on the printed page is at a premium. Therefore, when the editor of a journal is faced with a choice between publishing a replication or

publishing a brand-new study, they often tend to choose the latter. What has happened, therefore, is that replications have become seen as 'second-class' studies. There is a danger in this, because without replications we can be less confident in the research we have conducted and on which we have based our theories. However, partly because of the apparent unpopularity of replications at the highest level, students are sometimes also discouraged from conducting replications as the research in their final-year project. Another reason is that replications can be done without any creativity or ingenuity.

If your department prefers you not to conduct a replication, then of course you must honour this, but you might find that you can compromise and carry out research in two parts. A neat and worthwhile project can result from conducting a replication of previous research *followed by* a further development of the original experiment, thus carrying knowledge onwards. This approach can be very useful, especially to a student who is unsure about what topic to research. The topic simply presents itself, and it is often easier to develop previous research than invent a new strand of it.

One way in which replication can be particularly valuable is in testing out cultural or historical factors. For example, some early studies of the influences of advertising and the media were carried out decades ago, when television was much less commonplace. Today, people are generally considered to be more media-aware, and possibly even cynical about advertising. Therefore, looking at how the trends observed in the 1950s and 1960s might have changed could prove fruitful.

Genuinely novel research, of course, presents its own problems. Remember that if you have a great idea for new research it ought to be grounded in some kind of practical problem which requires an answer, or it should be aimed at adding to existing theory in some way. 'Wacky' or eccentric research is not typically encouraged unless it also has a serious aspect to it.

## PURE VERSUS APPLIED RESEARCH

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Another important characteristic of research hinges around the pure/applied distinction. It is fair to say that, for psychology academics, the days of pure research are almost gone, and this has started to affect

student research as well. Research needs to be funded, and with very limited money available the work that tends to attract funds is that which has a clear application to some area of life. Finding things out 'for the sake of it' has become a minority activity, with most attention being paid to directing research at answering questions which seem to actually *need* answering. Therefore, in order to train you for this world, your lecturers are likely to want you to choose a research topic with an obvious purpose. If you cannot think of a good reason why you ought to carry out research of the kind you are proposing, you should perhaps reconsider.

There is also an ethical dimension to pure and applied research. Not only is applied research all about making best use of resources, it also tends to avoid some of the dubious aspects of research, which in the past have included controversial topics such as racial differences in abilities. If you decide that you want to know whether different kinds of people differ in some way, you must ask yourself two questions. First, why do you want to know it? Second, what could become of the findings of your research? You have a responsibility not to create information which can be misused, or misinterpreted, or reinterpreted for an unethical purpose. There is a political aspect to all our lives, including the research that we do, and applied research is often safer because it is directed at a particular problem and is generally aimed at doing good and making the world a better place.

## **RESEARCHING THE PROJECT: FINDING LITERATURE**

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Finding literature relevant to a project can be very easy or very difficult, depending upon how you go about it and what it is that you are trying to find. The first point of call is often your supervisor. If you are researching something within their field of expertise, you will often find that they can suggest the sorts of things which you need to go away and read, perhaps even giving you the names of key researchers in the area. Of course, you must not rely solely on your supervisor. Most of the work has to be done by you, and that means systematically searching through electronic databases to identify appropriate articles.

## ***Using internet search engines***

Generally, my advice on using internet search engines would be this: don't. Internet search engines are not academic databases. Someone once said that 90 per cent of everything is junk. This may or may not be true, but there is an awful lot of junk on the internet. If you try finding relevant literature using the internet, you will have to filter out that rubbish and you might sometimes not know the difference between information and nonsense because some of the nonsense on the internet is masquerading as information. This sounds harsh, but it is sadly the case. There is a good reason why we have journals, and a good reason why we have electronic databases which enable us to search the content of the journals for specific themes. The reason is that articles in journals are subject to what is called 'peer review'. When someone submits an article to a journal, the editor first decides whether it is relevant to that journal. If so, it is usually sent to two or three experts in the field to comment on it. Only the articles which are highly rated by the reviewers are likely to be published. Therefore, there are considerable 'quality-control' checks on the nature of the information contained in journals. The internet isn't like that. If I want to post a picture of my dog wearing a dress, I can put it on the internet and no one questions it. Similarly, I could probably conduct some bad research, apply the wrong statistical tests to the data, write it up in terrible English, and then post it somewhere on the internet where it *looks* like it might be some proper academic work.

Most of the electronic databases that you should use for finding appropriate literature are internet-based, but that's almost all you should really use the internet for when looking for articles. Never do a search in a standard search engine and expect to find anything of high academic quality. If you do this, you'll end up looking for a single needle in millions of haystacks. Of course, there are exceptions, such as Google Scholar. This is specifically aimed at academic literature, so I would not want to throw the baby out with the bathwater.

## ***Snowballing and searching via citations***

Snowballing refers to a method of widening a literature search based upon the literature already read. In order to have an idea in the first

place, you might have come across an article or two which spurred your interest. This can be your starting point. Look at the reference lists of the papers you have in front of you, and you will find many other articles mentioned which you could then check up on. This process could carry on and on, of course, but after a while you will start to come across the same articles again and again in reference lists, at which point you will probably be approaching the point when you are exhausting the relevant literature. This can be a very slow process, but it is quite a systematic one, since you are using other people's literature searching to shape your own.



A GOOD RESEARCHER IS  
OFTEN FOUND IMMERSSED  
IN THE LITERATURE

A second, similar method is to identify a few key authors in the area you are researching and then look them up in a citation catalogue, such as the *Social Sciences Citation Index*, which your library will probably have access to either in printed form or electronically. You can look for a key author, and you will find a list of all the other authors who have referred to their work, thus allowing you to identify who the *other* important authors are.

### **Using electronic databases**

Your library will have access to a range of electronic databases, and some of these are specific to psychology (such as *PsychINFO*). It is not appropriate to give you advice on using all of these here, since your library will have details of them and usually your librarian will show you how to access them and use them if you ask. However, it is important to give you some information regarding the use of such databases, since they will become your electronic friends during the course of your project (even though at times you might feel like they are in league with the enemy). In addition to *PsychINFO*, which deals with psychological literature, you might also find yourself using *ERIC* (a database of educational literature), and a medical database such as *MEDLINE*. If you are conducting a project in health psychology, you might also like to look at the *British Medical Journal* online at [www.bmj.com](http://www.bmj.com).

Such databases are only useful when you know how to use them properly. You need to be aware that you cannot type in the title of your project and expect to find literature based upon that! The more you can identify key words related to your research, the more you can find relevant articles. Part of the problem can be the fact that, as a psychologist in training, you don't always know the key words you should use. One way around this is to find just one relevant article and then look at the key words associated with it. Then you can direct your search using those, letting the authors do the work for you.

### **Boolean operators**

Most internet search engines and those attached to particular databases allow you to fine-tune a search by the use of a particular set of terms which are well known to mathematicians and logicians: Boolean operators (named after George Boole). The main three you might use

are AND, NOT and OR, usually typed this way, in capitals. If you type 'fish OR chips' you will pick up everything with the word 'fish' in it, and everything with the word 'chips'. If you type 'fish AND chips' you will pick up everything which contains both of the words (but not necessarily in the same place in a sentence). 'Fish NOT chips' will only select items which contain 'fish' but definitely do not mention 'chips'. Finally, if you want the actual phrase 'fish and chips', you need to type it in quotation marks thus: "fish and chips". Boolean terms can be very useful when you are searching for a particular author. You might want everything by Hans Eysenck, but nothing by Michael Eysenck or Sybil Eysenck.

You can often use brackets to hone in on a very particular thing. Consider this search term:

(fish OR chips) AND (salt NOT vinegar)

What do you think this will find? Compare this to:

(fish AND chips) NOT (salt OR vinegar)

Consider moving the brackets around a bit, and you will change things again.

In addition to Boolean operators, you can also normally use 'wild-cards' to help your search. A wildcard allows you to say that you want to search for anything containing a particular string of letters or numbers. The standard wildcard symbol is \*. You might want to search for a 'family' of words which all come from a single stem. For example, you might want to find all articles pertaining to the concept of 'attitudes'. By typing in only 'attitudes', you could miss out anything which does not feature that particular word but does feature the word 'attitude', and the word 'attitudinal'. If you type in 'attitud\*' you will catch them all. Similarly, 'psycholog\*' will pick up 'psychology', 'psychological', 'psychologically' and even 'psychologies'. 'Crim\*' picks up 'crime', 'criminal', 'criminally', 'criminology', 'criminological', and so on.

## ***Narrowing searches***

When searching through databases for relevant literature, there are two situations which tend to make people groan. The first is when

there seems to be nothing written on a subject whatsoever. The second is where 38,906 articles contain the key words you typed in. That is, where there is simply too much literature to absorb. In these cases, some of these articles will actually be irrelevant, but you don't know what until you start to check them out. Of course, no one would expect you to read the abstracts of tens of thousands of articles for an undergraduate research project! You need some way of making the task more manageable. Using Boolean search terms like those mentioned above will help, but there are also a few more things you can do. Try to limit your search to articles published in English, unless, of course, you will have no problem reading Japanese or Russian journals! Most databases will allow you to select only those articles in the English language. This will normally only cut down the search results by around five per cent, but that's still five in every hundred you won't have to read through. Another possibility to reduce your workload is to exclude older articles. While sometimes you might miss some extremely important material this way, you ought to generally focus on more recent work in any current research report. By selecting nothing older than around five years, you will often cut away around a half of the listed articles. If you are worried about making sure that you catch all of the important older literature, don't. When you start reading some of your chosen articles, you will find that some of them refer to the older pieces of work anyway, and so you can then chase these references up separately in a manual, rather than electronic, fashion.

### ***Storing search results***

Databases of literature usually allow you to e-mail the results of your searches to yourself. I strongly recommend that you do this, and then check that the e-mail has arrived before you log off. You can normally select how much information you want to be sent to you. You should think carefully about this before you e-mail the results to yourself, because the 'full record', as it is called, contains a lot of information that you probably don't need. You can specify which fields you require, and most of the time you would only need a few fields like AUTHOR, YEAR, TITLE, SOURCE and ABSTRACT. By reducing the size of each record in a search that you send to yourself, you will reduce the file transfer time via e-mail, make it more likely that you can save the searches on a pen drive, save paper in printing off those

records, and cut down on the time taken to fish through them for the crucial detail.

### ***How many references?***

A common question that students ask is ‘How many references should I have in my report?’, and this is often followed up with ‘How many should be journal articles and how many can be books?’ Most supervisors answer this question with a statement like ‘It depends. . .’ or by asking the student how long a piece of string is. I’m afraid that there is no straight answer to this kind of student query. Every piece of research is different, and the background literature to some areas of research is enormous, whereas for other topics it is almost nonexistent. Of course, that doesn’t help you, as a student. Therefore, here is a vague and non-committal answer to the age-old question.

Aim to cite journal articles more than books, since journals are where you find original reports of research, and journals are peer-reviewed, which means that various checks and balances have been made to control the quality of the research reported therein. As for the ratio of one to the other, it is probably safe to say that an excellent research report often makes no mention of books, and is generally based almost exclusively on research papers. You should be aware, though, that some books are what we call ‘scholarly’, which means that they are collections of research papers, conference proceedings, and so on, and these are generally acceptable to refer to.

Now for an even more difficult issue. If you are walking a well-trodden path, where there is a lot of relevant literature, you should aim to summarise a good portion of it. This does not mean that your References section should contain thousands of items. In fact, many journal editors request that writers keep their References section as short as is realistically possible. When you are working on something that is very new, this should be quite easy anyway. Generally, stick to referring to only those articles which are directly relevant. For the average undergraduate student project, in my experience, any fewer than 10 references is normally frowned upon. Somewhere between 10 and 20 is starting to look respectable, and around 20 to 30 tends to ‘look good’. If you have more than 30, you *might* be over-egging the pudding. However, do consult your supervisor on this issue, because this is a very broad generalisation.

## ***Statistics on the internet***

There are a number of places on the internet where you can access some useful information that you might want to use in researching a project and writing a literature review or introduction. For example, you will find official statistics at [www.statistics.gov.uk](http://www.statistics.gov.uk), the site of the Office for National Statistics in the UK. If you want to know things like the number of births per year, or deaths, or marriages, or how many people have multiple sclerosis, you should look here first. Most countries in the Western world have similar sites which will then allow you to make comparisons across nationalities or cultures.

## **CHOOSING A METHOD**

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There are two main ways of selecting a method. The first is to choose a method which you are comfortable using, and ignore the rest. This is not to be recommended, since a good psychologist ought to be able to use whatever method is the best to investigate the issue in question. However, we need to be realistic, too. If you really don't understand mixed designs (or the split-plot ANOVA you'll be using to analyse the results), or if you can't get your head around grounded theory or discourse analysis, then you probably won't achieve particularly good marks if you try to use them in your project. Therefore, using a method (and subsequent analysis) which you truly understand is sensible.

The second, and preferable, approach is to choose the most appropriate method for what you want to research. Knowing what the best method is involves a degree of skill which develops over time, and your supervisor will be able to help with this. Everyone has their favourite methods, however, and you should make sure that your supervisor is actually able to offer the right research methods expertise to help you with your project. Don't just assume that every lecturer is capable of conducting every type of research, or even interested in doing so. Coming to a decision as to an appropriate method to employ is a matter of negotiation between you and your supervisor.

## ***Single-case designs***

Single-case designs tend to be rare in student projects, although there is no obvious reason why. Working on a piece of research involving just one participant does not mean that the research is necessarily any easier than research conducted with hundreds of participants. A lot depends upon the nature of the research.

Single-case designs are mainly experimental in nature, although not usually subject to statistical analysis. In some ways, they are more difficult to conduct than studies involving large numbers of participants, since a single individual is often very sensitive to small fluctuations and discrepancies in the research which would be diluted in studies with groups of individuals.

If you really want to conduct a single-case study but your supervisor is not convinced that this is a good idea, perhaps because they favour studies with more participants, a compromise is to suggest a single-case-series design. This is where a number of separate single-case designs are conducted, each in the same way, and the trends in the data examined by representing each person as one line on a graph.

Bear in mind that the amount of work involved in the simplest single-case design, such as A-B-A, is probably not appropriate for a final-year research project conducted over nine months or so. Therefore, you should aim for a more elaborate design, such as A-B-A-B-A, or involving multiple 'treatments', such as A-B-A-B-A-C-A-C-A.

## ***Case studies***

Case studies are often mistaken for single-case designs. However, they are not the same thing. To an extent, the case study is the qualitative version of a single-case design. Instead of looking at individuals and measuring things with numbers, the case study deals mainly with words, and the diary method is a common tool for conducting case studies. Again, these are not commonly conducted in student projects, because case studies are most often used in clinical, forensic, educational and psychotherapeutic contexts, and students do not generally provide therapy for people, and are, by definition, not trained clinical, forensic or educational psychologists with access to clients.

Therefore, if you like the case study method, you must think very carefully about what you are aiming to find out and from whom. You

are only likely to be able to work with a participant who is not a patient or client in some professional context, and so this cuts down on what you might look at. One perfectly acceptable case study could be to use a qualitative method to plough through a diary kept by a person giving up smoking or chocolate, for example. This might provide some useful insights for health psychology which most studies to date might have failed to uncover.

### ***Choosing qualitative methods***

Qualitative and quantitative methods are not always opposed to each other. While there are some qualitative researchers who adopt these methods because they totally reject the positivism which has dominated research in the world for centuries (and still does), there are a great many who select methods appropriate for their research, sometimes quantitative, sometimes qualitative, and occasionally both. The subject matter often dictates the nature of the research. Investigating aspects of working memory, for example, would be terribly difficult if you chose a qualitative method, because people are generally not able to articulate memory processes very well. However, studying attitudes to spirituality within a personal context is unlikely to be achieved using an experimental method, or indeed any method which yields numbers.

One crucial aspect which may determine your choice of method is the 'richness' of the data. Generally, qualitative work produces 'richer' data than quantitative research. By 'richness', researchers usually mean that the data can provide deeper and often more emotional insights into the processes and notions being researched. If you really want to get at the thoughts and feelings of your participants on a particular issue, you ought to be considering a qualitative method and analysis. Don't forget that qualitative analysis can stem from written texts, not just interviews. It is possible to take written answers to questions asked and subject them to a qualitative analysis. Most of the time, however, you are likely to conduct interviews to which you then apply a method such as discourse analysis or grounded theory.

Of course, qualitative methods come in many forms. Selecting one of these is sometimes a matter of the researcher's personal preferences, and in addition there are many debates between qualitative researchers as to which method is the best. Some researchers change methods depending upon the research, others stick to only one method, and

some try to blend methods in one piece of research. Most of the time, student projects involve just one well-established method.

This, as you are aware, is not a book on research methods, and so it is not appropriate here to give details of different qualitative approaches, but I have tried to make a few practical points about various qualitative trends in research:

- **Qualitative approaches are not just methods of analysis. They are entire philosophies about the way that research can and should be carried out:** therefore, you should never try to ‘tag on’ a qualitative analysis to a quantitative project. Furthermore, never say something like ‘the data were subjected to a grounded theory analysis’. The whole project needs to be based in grounded theory, not just the analysis.
- **Content Analysis:** to some academics, this is not really a qualitative method at all, but people sometimes talk about it as if it is, so be warned. It *can* be qualitative, but can also take you off into the realms of numbers as you begin to analyse patterns in data, and hunt for meaning in those patterns.
- **Protocol Analysis:** this is a type of qualitative approach leading from the method of introspection in cognitive psychology. It is a kind of bridge between qualitative and quantitative methods. It is only used where you want a different kind of perspective on the way that people go about things, such as solving problems. If you like cognitive psychology, but you like qualitative methods, this is a way of combining your interests.
- **Thematic Analysis:** this is a fairly basic approach which corresponds in some way to the first stages of the more complicated methods such as grounded theory. It is not always a good way to achieve great marks because it can be a little simplistic at times.
- **Grounded Theory:** it is often difficult to conduct proper grounded theory in the context of a student project, especially where a proposal or literature review is required before commencing the research. One of the principles of grounded theory is that the ideas emerge from the data. You start as a naïve researcher, if possible. Therefore, it is generally recommended that you don’t read all the literature before beginning. This can be tricky when you are being asked to do so. Be warned that a good grounded theory project

can take a lot of time to do properly, especially because it normally involves going back and forth, generating ideas and following them up with more and more interviews until you feel that you haven't got anything left to say, and neither have your participants.

- **Ethnographic Methods:** these involve experiencing rather than observing. This can be difficult for a student to do. An ethnographic researcher discovers what it is to be a gambler by becoming one, or learns to understand the world of shoe retail by getting a job as a footwear salesperson. You would be advised to avoid the kind of ethnography which would involve you getting tied up with a world you might find it hard to escape from or which would affect you adversely. However, if you really wanted to try to tie in a new part-time job with your project in an interesting way, this *could* be possible. In addition, ethnography is about trying to interpret everyday life and the things we normally don't reflect on, not things which are out of the ordinary. Of course, different things make up ordinary, everyday life for different people.
- **Discourse Analysis:** this is not a single method, but many methods under one huge umbrella. Discourse analysis allows you to examine the nature of the way that discourses, or texts, are constructed by the language that we use to represent them. The language we use is not just seen as a tool to describe what is happening; it *is* what is happening. It has a strong political force behind it, in that we often are looking at the way we construct the world around us and the power relations that we develop to substantiate our involvement and our stake in various discourses. Discourse analysts don't usually try to suggest that the discourse is representing some deeper feelings or thoughts. The discourse is what everything is made of. You say something, which is a text. I think about what you mean, creating another text. This process is endless, but the texts are all that we have. It is hard work: be warned.
- **Interpretative Phenomenological Analysis (IPA):** an increasingly popular approach to qualitative psychology, especially within the study of health beliefs and cognitions. It deals with understanding the experience of a person, making the assumption that what they say reveals their deeper thoughts. In this sense it is quite different from discourse analysis (Smith, Jarman & Osborn, 1999). IPA is rapidly becoming the qualitative method of choice for health psychologists in particular, but can be used in any branch of research.

It is possible to adapt the methods of the originators of this type of approach, as long as the main philosophical stance is preserved, which is that people's reported experiences and conversations can actually reveal their 'real' thoughts.

- **Poststructuralist or Postmodern Methods:** for most students, such methods are out of bounds because they are often very difficult to carry off properly. You need to be very *au fait* with what postmodernists think and feel, and because postmodernists reject being tied down to very much at all, you can easily get lost and feel like you are not actually doing research in the conventional sense. In fact, some supervisors might object to you carrying out some of the more esoteric postmodern methods, which could, in theory, include writing up your research in the form of a poem!
- **Repertory Grid Technique:** repertory grids are ways of exploring the way that people see their world, and themselves, and themselves in relation to their world. By identifying scenarios, and thoughts about scenarios, and by expressing ideas about other people, the participants (and the researchers) gain access to some of the ideas they possess about themselves. There can be some ethical issues surrounding the use of repertory grids because they can hold a metaphorical mirror up to people, revealing to them things which they did not realise they thought. Therefore, you should undertake this kind of work only in certain contexts and your proposal will be likely to be subject to careful, ethical scrutiny.

It is important to stress that you should not automatically seek to conduct a qualitative project because you dislike statistics or think that it will be easier than a quantitative project. It almost certainly won't be easier, I promise, and the amount of time you spend on a qualitative project is, if anything, likely to be more than that which you spend on a quantitative project. The difference in time could be used for brushing up your statistical knowledge! Of course, this is not meant to put you off conducting qualitative research, simply to warn you if you are thinking of doing it for the wrong reasons.

### ***Differences or relationships?***

One of the important issues to think about is whether you intend looking at differences between groups or at relationships between

variables that you have measured. As you should know, differences lead into analyses such as ANOVA, whereas relationships are analysed using correlation or regression. What you might not realise is that *sometimes* your study could turn out to involve either or both of these. As an example, consider a situation where you intend looking at problem-solving as a function of age and IQ. You have problem-solving scores from your participants, and you have their ages and IQ scores. Now, the most sensitive analysis would be to carry out a multiple regression predicting problem-solving scores from the other two variables. However, it is also possible to group ages and IQs. If you did this, perhaps into three groups of each (young, middle, older and low, middle, high), you could then fit this into an ANOVA. Statisticians would strongly recommend the regression analysis rather than the ANOVA, but if you were concerned about not having a good range of scores in your data for each variable then the ANOVA would be appropriate. I raise this because it makes the point that you should try to design certain studies so that you use continuous variables wherever possible. Aim for that, and if you get gaps in your data you can always switch analysis later. If you simply aim for categorical labelling of participants from the start, you can't switch to the more sensitive regression analysis in the future.

One more issue you should remember is that of causality. Regression does not allow you to suggest that one thing actually causes another, because it is simply an extended form of correlation. ANOVA usually does, because it is an analysis that can be tied to the experimental method, where you have manipulated a set of independent variables to look for their effects on a dependent variable. However, the study described above is not truly experimental because the IQ and ages of the participants are not actually manipulated. Therefore, you should be thinking hard about the conclusions you want to make about your data and whether your method and your analysis will allow you to answer the questions you have.

### ***Primary or secondary data?***

Primary data are those that you have collected yourself, whereas secondary data originate elsewhere. Departments differ in their opinion of students using secondary data. However, generally, you will find that you are expected to collect primary data when using quantitative methods, but that secondary data are more acceptable when you

are using a qualitative method. This is because there are certain common aspects of qualitative research which involve only secondary data, such as the study of TV or newspaper discourses. If you want to understand the nature of the representation of Romany people on TV, you wouldn't make your own TV programmes! You would use those which exist, and they would form your (secondary) data.

## ***Observational methods***

Sometimes, the most appropriate method is an observational one. This is very often the case in any research into aspects of either social or developmental psychology. For example, you might want to research proxemics in a cross-cultural light. Proxemics is the study of personal distance, for example how close to each other people stand or sit. If you happen to have links with another culture, you could compare the average distance between British people in a queue with the queuing distance for Greek people, for instance. You would probably only consider doing this by employing an observational method.

Similarly, a developmental psychologist might be interested in some aspect of children's play behaviour. Again, you can't manipulate play directly, since you are likely to interfere with normal processes, and so you would best tackle this topic by observation.

Observational studies require considerable planning. The key issue lies in making operational definitions of the behaviours concerned. You need to be very clear, before you commence the study, what you are actually observing and how you are coding and recording it. Observed behaviour can be very erratic at times, and you should have a coding scheme which covers almost all predictable eventualities. This is particularly important if you are observing things as they happen. Unless you are able to code everything that you see which is relevant, you will end up missing some important events. There is not the time to consult your supervisor when things start to happen that you haven't got any code for.

You should not underestimate the time that it will take to codify a small amount of videotape. Even five minutes of tape could take several hours to fully codify, depending on the complexity of your coding scheme.

You should set aside considerable time for piloting your observational research, and this should include a check on the reliability of

your coding decisions. Just because you think that ten minutes into a videorecording you spot an example of someone solving a problem by lateral thinking does not mean that someone else would agree. Therefore, when you have a pilot videorecording to work from, code a part of it and then ask someone else to spend an hour or so going over the same portion of the tape. Then compare your results. If there is a high level of agreement you probably have a reasonable coding scheme and can continue to use it. If you don't agree, you will need to rethink the coding scheme since it is likely that it is subject to bias and not as objective as you would hope.

Similarly, if you are observing in the raw, without recording, ask someone to come along with you and make observations at the same time as you. Again, if you find that you are agreeing most of the time, then you can assume that you have a relatively objective method of measurement.

## ***Protocol analysis***

Protocol analysis is a method of understanding cognitive processes which is generally subject to a qualitative analysis. In some ways it spans the chasm between quantitative and qualitative approaches. It has its roots in the method of introspection which was used in the early days of cognitive psychology. Essentially, participants articulate, out loud, their thought processes as they solve problems, and researchers analyse the resulting transcripts for evidence of particular problem-solving approaches, perhaps mapping these on to the theories derived from mainly experimental studies. Although protocol analysis is a relatively minor method, it can be a good one, and certainly ought to be considered if you want to investigate what people are thinking when they perform tasks.

Bear in mind that protocol analysis is hard work, and sometimes can be more difficult than either experimental or standard qualitative study. It cannot be used when cognitive processes are so quick that they are over in less than a few seconds, because the participants will have nothing to say. It is best used where the problems being solved take minutes or even hours. There is also the problem of the 'language epiphenomenon' to consider. Just because someone says they are thinking something does not mean that this is actually going on. They might be telling the truth as far as they are concerned, but the

thought processes are often going on at a level below consciousness, with the protocols being only a representation of that which is fed into consciousness. This problem is probably the main reason why protocol analysis is not the most popular method of understanding cognitive processes.

## ***Multiple methods***

In some research, using more than one method might be a good approach. Addressing a problem in more than one way can be very revealing. We often call this triangulation. If more than one method achieves the same results, we can say that we have triangulated our findings. In the past, I have seen some very good projects where the student has conducted a questionnaire survey (with a quantitative analysis) and then followed this up with some interviews involving qualitative analysis. Often, the same thing comes out of both approaches. You feel more confident in your results if you can show that they are present no matter how you look at the subject. However, some qualitative methods are derived from a tradition which is absolutely opposed to the concept of triangulation, so you need to take this into account so that you don't try fitting a square peg into a round hole.

## **CONTROL GROUPS**

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Throughout your studies, you will generally have been taught that it is wise to include a control group in most research designs. Theoretically, it is true that control groups are useful and represent an ideal which you should always consider. However, it is not always practical to include a control group, and sometimes it does not even make sense to pursue such a course of action.

In studies where you are interested in a particular group of people, you can often discount including any kind of control group. This can happen when you are conducting interview research into the thoughts and feelings of a certain subset of the population. If you want to know what Pakistani people feel about unemployment, then ask them. You would only ask other people if you specifically wanted to compare

Pakistani people with another group. Another example could be where you are interested in how doctors come to diagnostic conclusions. In such a case, it is only doctors who formally make such decisions, and so understanding how people who are not doctors diagnose illness is absurd.

More controversially, there are other kinds of studies where you do not necessarily require a control group. Although academics would debate this, occasionally you can also skip a control group in more experimental studies. If you want to look at the effects of caffeine on motor performance, it can be argued that you don't need a non-caffeine group, as long as you have more than one dosage of caffeine being given to participants. If you expect caffeine to speed up performance, you might have three caffeine groups: mild, moderate, and strong dose. If you find an increase in participants' speed across the three groups, then it is difficult to argue that it is not due to caffeine, and so the control group is, one could suggest, unnecessary. The control group is probably no more necessary than some additional caffeine groups. Some researchers would counterargue, and rightly so, that you can't be sure of the point at which caffeine starts to have an effect unless you have a control no-caffeine group. By looking at the comparison between the control and the treatment groups, you can get a sense of how much caffeine you actually need before you notice a difference beyond that observed when caffeine is not involved. Bear in mind, therefore, that excluding a control group is essentially a cost-cutting exercise, and you should not do it unless you have to.

## **MATCHING METHODS TO ANALYSIS**

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You should never carry out research until you are utterly sure of what analysis you can conduct when the data are collected. It is very easy to plan some research which is actually impossible to analyse, or only possible to analyse if you have carefully stratified your samples and have thousands of participants! When you are excited about some research, you have a tendency to think deeply about it and come up with dozens of variables which you feel you really must measure if you are to find out what you want. The more you read about a subject,

the more you think of things which are important to study. However, every time you add a variable or measure to a study you complicate the analysis and increase the number of participants you need to recruit. Therefore, you might find that you take a rather large and straggly idea to your supervisor, who then takes a pair of clippers and snips away until you are left with something much neater and more manageable. In fact, going to see your supervisor is often like a visit to the hairdresser. Their job is to trim and shape what you have, to advise you against doing something you might regret, and you tend to feel better when you leave.

Always keep in mind, when you are planning research, what your data will look like, and exactly what kind of analysis (statistical or otherwise) you are going to feed the data into. This is mainly an issue for quantitative projects, but can affect any research.

If you plan research carefully, there is no reason why you cannot find a suitable analysis or set of analyses to perform, and your supervisor is there to make sure that you don't collect data that you can't do anything with. Always remember, however, that when it comes to quantitative work, particularly experiments, you should really only conduct statistical analysis which is directly aimed at answering the questions raised by your hypotheses. If you later go fishing around in your data you could end up finding things which aren't really there. Statistical tests are designed to help you to answer specific questions, not to enable you to trawl around sets of numbers until you find something.

## **POWER ANALYSIS**

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Although this is not a book on statistics, it is relevant to mention power analysis here, since it should help to inform your research plans. In my own experience, it is very common for students to talk through a piece of research and then ask a very particular question at the end: 'So how many participants should I get?'

Power analysis can be used to answer this very question. Almost all statistics books give details of this kind of predictive analysis, and it can be used to give you an idea of the sample size you might need. You can even find shareware programs on the internet which will calculate

the sample size required if you can set a desired level of power and estimate of effect size.

If you are conducting research which involves cooperation with a hospital, or general practitioner, for which you need to submit your research to an external ethics committee, you will almost certainly have to conduct a power analysis to determine your sample size. This is for a good reason. Ethics committees like to be sure that you only deal with the minimum number of people for the study to be effective. Otherwise you are pestering people for nothing. Therefore, a power analysis helps to show just how many people you need to have involved in your study, and it stops you collecting data that are superfluous.

## **TO PILOT OR NOT TO PILOT**

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One issue to consider is whether you need to pilot your research before launching it properly. This really depends on your subject matter, and your supervisor is the best judge of this. However, there are some principles worth following.

Firstly, if you are using any special materials that you have had to create for the purposes of the study, a pilot is essential. With an interview, you should run a test version to see if your questions and interview style work well with people. One participant might well be enough. If you are using word lists and so on, then you would need to test those out on a larger group, and if you are developing entire questionnaires, the same applies. If you have complicated instructions, you really will need to run these by a set of would-be participants, because you do not want to be in a situation where half way through a run of 150 participants you suddenly realise that you have an ambiguous instruction, which means that you have no idea which way your participants are interpreting what you have asked them to do!

Very few studies require no form of piloting, but remember that this is a student project, and isn't intended to be perfect. Large-scale research often needs large-scale piloting, but you simply don't have that luxury. However, small-scale piloting will make all the difference sometimes between a disaster and an impressive piece of work.

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## DEVELOPING MATERIALS

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It is not possible to give specific tips as to how to set up every type of material that you might conceivably use. The potential for developing materials is infinite. However, there are some general rules that you should follow when creating interview schedules, constructing questionnaires, making up stimuli, and so on.

### *Experimental stimuli*

Stimuli for experimental studies can be extremely difficult to create. Mostly, such stimuli are created for specific kinds of experiment, those conducted by cognitive psychologists interested in the nature of the mental lexicon or in how we perceive objects. Stimuli come in a number of modalities. They can be auditory, visual, or even olfactory or gustatory. Frequently, they take the form of lists of words and non-words. You are often interested in people's reaction times when responding to these stimuli.

Let us take, as an example, a lexical decision task. Here the participants must decide whether the text presented on a screen is either a word or a non-word. In constructing the stimuli, you must consider a number of things:

- The words you choose will probably need to have certain characteristics. You might only want nouns, or only verbs, for example. You should also consider their frequency in the English language. In a lexical decision task, you would normally want fairly common words because if you use rare words there is a chance that your participants simply won't have heard of them. You can't decide if something is a word if you have never heard of it. You can consult special books of word frequencies from which you can extract stimuli. Your library may have one of these, or some can be found on the internet. They are usually called something like a 'word-frequency corpus'. Consider also using the stimuli that someone else has already constructed. You will commonly find lists of these in the appendices of relevant articles.
- You will need as many non-words as words. Not only this, but they should be matched with the words you are using for length, and

possibly other characteristics such as initial letter. Usually they will have to be what are called pseudowords. These look like words but aren't, for example 'spung'. This is because a random string of letters (such as 'drpuig') is immediately recognisable as a non-word, but a pseudoword isn't. You don't want the task to be too easy for the participants.

- You need to consider how many stimuli you will need. If you have too many, participants will lose concentration. If you have too few, then you will be left with even fewer responses on which to base your analysis, especially after trimming the data to remove any outliers. Furthermore, as you will realise, the more stimuli you have the greater chance that you will be genuinely tapping the ability of the participant and the more confident you can be in the results of your study. There is no magic formula for deciding how many stimuli to have, which is one reason why you should conduct a pilot study. However, you should aim for a task which does not take more than about five minutes for your participant to complete.
- You should think about whether you want all stimuli presented in a long block, or whether you can give your participant a number of smaller blocks.
- You should avoid patterns in the presentation of stimuli which could lead participants astray in responding. This is especially a problem when using smaller numbers of stimuli and relying on a computer to present them. If you have words and non-words, and you allow the computer to randomly present stimuli plucked from each set, you could find that a sequence of presentations all come from one category, such as words. So your participants are faced with seven real words one after the other. When this kind of thing happens, your participants sometimes get distracted, and wonder if something has gone wrong. Or, you might get a sequence where words alternate with non-words. Such sequences are rare, but can happen in randomly generated lists. To avoid this, researchers often rely on what is called a pseudorandom sequence. Some computer programs will allow you to do this. Instead of a genuine random presentation where anything could happen, you make sure that these patterns of stimuli do not occur. So, you might choose to allow no more than three stimuli from a particular category to be presented, for example. The participants do not know this, and feel like the stimuli are

being randomly presented, but the order of presentation is not truly random because you have tinkered with it a little.

- Don't forget to have some stimuli left over when you have constructed your lists in order that you can set up a practice trial. You should never use your real stimuli in the practice trial, because priming effects can occur.

Check with your departmental technicians, because they might surprise you and have a store of useful stimuli to hand, either from previous research projects, or even commercially obtained ones.

## **Questionnaires**

Often it will be entirely appropriate for you to take tests straight 'off the shelf' and use them. However, sometimes you will be creating your own questionnaire. The first thing to note is that you cannot, realistically, develop a questionnaire which will have the same high degree of validity and reliability as published ones. Published tests and questionnaires have been through many versions in their development, and have usually been tried out on hundreds and often thousands of respondents. However, you should still aim to follow the normal procedures for constructing questionnaires, even if you do everything on a much smaller scale.

If you do need to create a new questionnaire, begin by simply thinking of questions off the top of your head. Write down as many as you can. Furthermore, you might like to ask some friends for their ideas as well. Occasionally other people can have surprising insights into the kind of thing you are researching, even when they are not psychologists.

Imagine that you want to create a questionnaire to measure emotionality. By this, we might mean the tendency for some people to feel things very strongly and for others to feel them less so. We all know people who are 'touchy' or 'soft' and who might cry at the drop of a hat. Then there are those people who are 'as tough as old boots' or 'hard'. They never seem to cry or be affected by sob stories. There is no reason why you could not ask non-psychologists to think of examples of what being emotional means. Most people have an opinion on it, and could think of examples of it. You could also ask a few people you know who you would describe as emotional types. What makes

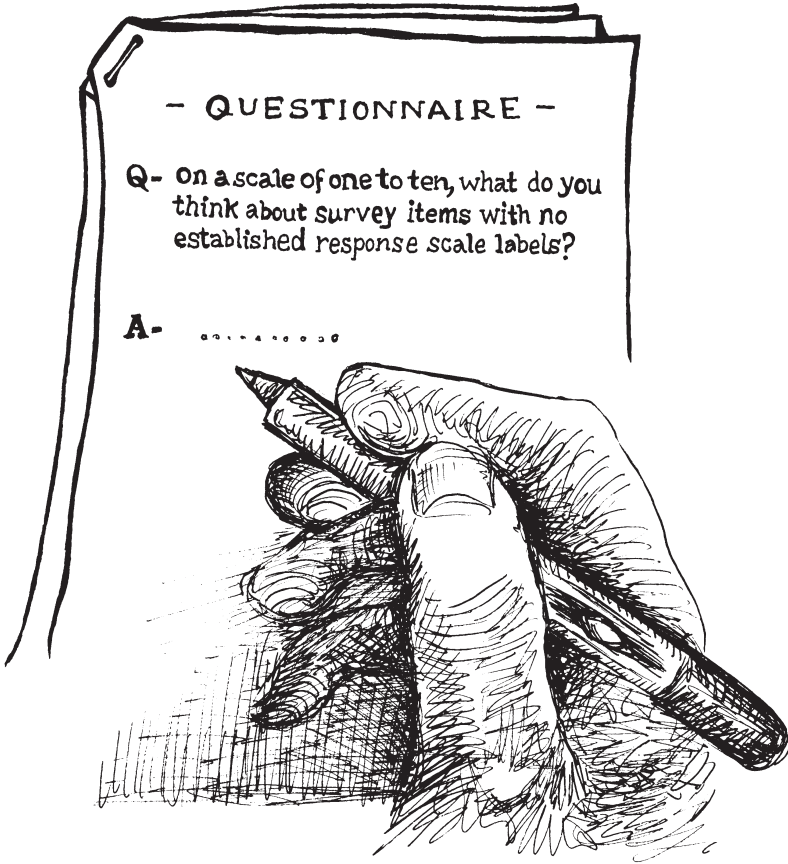
them feel upset or happy might prove useful information to you. In the end, you should be able to construct a large number of potential questions. They might involve various scenarios such as being affected by sad stories on the news, being easily hurt by offhand remarks, being emotionally affected by films or poetry, and so on.

Try to create questions which ask just one thing each. That is, avoid double-barrelled questions where a person is not sure what they are agreeing to. If you ask someone if they think that alcohol is bad for the mind and the body, do you want to know if it is bad for the mind, the body or both? Surely it is better to ask both things separately?

Use simple language when writing questions. Try to imagine the least-educated person you would be asking to participate, and make the questions clear to them. If you can do this, all participants will be able to answer your questions properly.

Think carefully about the nature of the measurement scales that you are using. Some questionnaires simply present statements which require a YES or NO answer. The number of answers is then totted up for each to give a total score. Others require responses on a Likert-type scale. Some contain a visual analogue scale where respondents must place a mark on a straight line to indicate the strength of their opinion. Try to stick to one type of scale, because it makes life easier for the respondent. Make sure that your respondents don't have to keep turning back to the front page in order to check the details of the response scale. Print the scale on each page, or, if relevant, beneath each individual item.

When you have questions about the importance of various things, think about asking your participants to rank those things in order. So, if you want to know what people think is the most important health behaviour from a list such as not smoking, eating fruit and vegetables, taking exercise, and so on, consider listing these and asking participants to respond by giving a number of importance to each one. This can be a neat technique for forcing people to compare various things, but be aware that it can also be a little artificial and should only be used when you know exactly what you want people to think about. You are suggesting all of the behaviours or attitudes to be ranked, and so you miss out on other things which you, perhaps, haven't thought of, but which are important to your respondents.



Always have more questions than you need. Some will have to be cut out in the later stages of constructing the questionnaire. If you intend having a questionnaire with 20 items in it, start the process with around 30 to 40 items. Pilot the questionnaire, and then check the internal reliability of each scale or sub-scale you have created by running a test such as Cronbach's alpha. Remove any questions which do not cohere with the rest, and aim for a high reliability coefficient (generally 0.8 or more). Remember that you only run Cronbach's alpha on questions which you believe are all asking the same type of thing. Don't just put every single question into the analysis. Additionally, ask your pilot participants to comment on the questions. You might find that what makes sense to you does not make sense to them.

Avoid ‘acquiescence response bias’ where possible. If you have a set of questions which are all worded in a particular way, people stop thinking about the questions and simply assume that because they have answered YES to all 17 so far they will be answering YES to the rest of them. This is a very dangerous situation because it compromises your entire research. It also bores the pants off your participants if they never have to think and reflect on your questions. You can try to avoid this by rephrasing some of your questions so that they require a reversal of the scale. In the case of YES/NO responses, imagine the following:

- I like the human race. YES/NO.
- I enjoy a night out with friends. YES/NO.
- There’s nothing better than a lively party. YES/NO.

Imagine you were presented with 20 such statements. If you generally are a sociable and philanthropic person, you will probably answer YES to all of them. However, you should try to aim for at least one-third of your questions pointing to a NO response. So, we can rephrase all of these questions and effectively turn them around, thus:

- I dislike the human race. YES/NO.
- I do not enjoy a night out with friends. YES/NO.
- There’s nothing worse than a lively party. YES/NO.

Now the sociable person is required to answer NO. By mixing questions of this nature, you make sure that your respondents have to think about each question.

Eventually you ought then to have a questionnaire which is almost usable. Of course, at this point you can’t guarantee that you have high validity, unless you have tested your questionnaire against existing ones which aim to assess the same thing. It should be said, however, that if a questionnaire already exists you would have probably used that one instead of going to the trouble of creating your own.

Make sure you include some demographic questions at the head of your questionnaire, unless you really don’t need them. However, if you don’t ask these questions you lose the chance of looking for

age or sex effects later, for example, should you wish to explore this in your data. There are two things to keep your eye on with respect to asking your respondents' ages. First, if you insist on asking people to choose an age category, make sure they don't overlap! I have frequently seen first drafts of questionnaires where the age categories are 20–30, 30–40, 40–50, and so on. Of course, if you happen to be exactly 30, or exactly 40, you have a choice of two categories! This error ought not to occur, however. The reason is because you ought not to be asking for age in categories. Why not simply ask people to give their exact age in years? That way you have a much more sensitive measure of age, which you might want to use in regression analyses, for example. If you really want to categorise age you can do it later.

A good questionnaire contains the minimum number of items to find out what you are interested in. People groan when you hand them a weighty questionnaire to fill in, and so you should try to make your respondents' lives as easy as possible. Of course, too few items could mean that you aren't really digging out the information that you need, or rather you aren't adequately sampling the attitudes that you want to learn more about. It's not possible to give a formula for the optimum length of questionnaires, but you should always time your participants in your pilot study to get a sense of how long it is taking them to fill in your paperwork. Generally, any more than 30 minutes and you are probably going to annoy your respondents.

### ***Looking professional***

The way that your questionnaire or instructions are presented can be very important in conveying a sense of professionalism. Well-presented materials, especially clear questionnaires which are pleasing to the eye, can add to the quality of the data you collect. When people see that you are serious and intelligent, they take you seriously and show you their intelligence too. Shoddily presented questionnaires full of mistakes of spelling and grammar do not inspire confidence.

Although you are not a designer, you should always take a moment to look at the design of your questionnaire. Does it look 'posh' and 'fancy', or something that a beginner has thrown together in a matter of minutes? Now, posh and fancy does not mean using bizarre

typefaces which are difficult to read, or including unnecessary pictures, but it does mean having clear text, having just the right amount of text on each page, and tidying up the text so that it looks as much like something you would find in a book as possible.

- Justify the text on both sides of the page.
- Make sure that headings are emboldened so that they are clear.
- Put spaces between questions, and make sure that there is the same amount of space between each item.
- Give respondents enough room to give their response, whether it be a tick box or a blank space for writing comments.
- Number the pages so that people realise if there is a page missing.
- Show everything to your supervisor before you distribute it, so they can help to spot errors and omissions.
- Check what you print off before you photocopy it for distribution. Just because something looks good on screen does not mean that it will print properly.
- When you want to equally space items across the page, don't use the space bar to move things along. The space is a character just like a letter. Your word-processing package is likely to adjust the size of spaces depending upon the rest of the text on the line, thus messing up your spacing. Use proper tabulation which you can set, or put the items into columns in a table. You can hide tables by removing the lines around them, so that when they are printed you can't see them. The text in them stays in place, however.

## ***Interviews***

Many of the issues surrounding constructing good items in a questionnaire survey also apply to the questions you would generate for use in an interview. However, interviews also have their own issues to be borne in mind.

In the case of interviews, the material takes the form of the interview schedule. Some methods of qualitative work do not involve the use of a schedule, since the aim is to simply allow the interviewee to talk freely without prompts. However, the majority of methods do involve a schedule, or some indication of the likely questions, loose as that may be.

It is often not easy to generate questions which will actually serve the intended purpose. You must aim to encourage your interviewee, whilst not leading them to give you the answers that you want. Leading questions are not acceptable. You must be clear. Equally, you must not give too much away. The worst problem that you can face is when you have an interviewee who is simply not forthcoming. There is a temptation when this happens to blame them, ascribing the problem to their shyness or awkwardness. However, you must not do this. If someone is not saying much, it's because you are not doing your job properly. If you have taken the trouble to prepare properly this should happen very rarely. Your questions should not be of the type where it is possible for people to simply utter 'yeah', 'suppose so', or 'no'. This very problem is why you should practise your interview technique. Basically, you need to conduct a pilot study, primarily to ensure that you have the necessary skills to actually conduct a good interview. You must make the interviewees comfortable, willing to talk, and happy to be honest. Different kinds of people require different interview techniques to get the best out of them, and you must be adaptable whilst working within the constraints of your research and sticking to the subject at hand.

A good way to see if you have prepared an effective interview schedule is to try it out on your least talkative friend. Don't pick the gabby one who will talk about the inside of a ping-pong ball for an hour. Choose the quiet one.

One increasingly common type of questioning is sometimes known as the *narrative approach*. Rather than ask people direct questions, you ask them to tell you about something that has happened to them. They end up telling you a short story selected from their experiences, and they simply can't answer abruptly and briefly because of the nature of the question asked. Narrative questions are quite easy to construct, and are often like these:

- Tell me about a time when you treated yourself to something nice.
- Could you tell me about an occasion when you felt cheated by someone?
- Can you describe a situation you found yourself in that you learned something from?

Be prepared to follow up these questions, however, if your interviewee is confused by your question. I can remember the very first time that I was interviewed using this approach. The researcher started the tape recorder and then said something like ‘tell me about relationships’. I didn’t know what to say. I didn’t know where to begin, or whether I would start talking only for her to stop me and say that I was not talking about the ‘right’ things. My question to her was ‘What about them? Could you ask me something a little more specific so I know what you are interested in finding out?’ So, bear this in mind. Anyone who knows me will tell you that I can normally talk the hind legs off a donkey, but I was rendered speechless to begin with.



**WHILST PSYCHOLOGICAL RESEARCH  
DOESN'T HAVE TO INVOLVE HUMAN  
PARTICIPATION, IT IS NORMALLY  
RECOMMENDED**

## ***Cross-cultural studies and translation of materials***

Generally, you are unlikely to be interested in conducting cross-cultural studies unless you have some personal involvement in more than one culture or ethnicity, mainly because you need to have intimate knowledge of some cultures in order to even think about studying them. Quite a few students do have this joint background, however, and in my experience such students often conduct some interesting and valuable research. In Britain, there are particularly strong communities from the Indian subcontinent, from China and Hong Kong, and from African countries and the Caribbean. Furthermore, substantial numbers of students from Europe also choose to study in Britain. Often, students with relevant family histories choose to investigate various aspects of their family cultures. One key issue for all cross-cultural studies is that of translation of materials. If you are using questionnaires or other test materials you will often need to translate them into another language. Without boring you with all of the theory of interpretation and translation, which is a whole area of study in itself, there are a few things you need to remember.

Don't translate things word for word. Translation is all about conveying meaning. Therefore, you need to consider what your materials in English actually are aiming to achieve, and attempt to create translated materials which have the same objectives. Most of the time you can translate things quite easily, but now and then you will, perhaps, have to drop certain items because they do not travel well from one language to another. Equally, what might be a perfectly good question to ask the average British person might be utterly rude to ask a person from Pakistan. Be very careful that you consider all of this.

When you have translated your materials into another language, find someone else who is fluent in both relevant languages, and get them to 'back-translate'. So, you will end up with a second version in the original language. Then compare yours with theirs. They should be similar, and if they are not, you need to consider what you are going to do about it. Discuss this with the other person, and see if there is any agreement you can come to. If you really can't agree on a translation, then there is a possibility that you need to reconsider your research.

## 'BORROWING' MATERIALS

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Whether it be questionnaires or lists of stimuli or photographs, you might be able to use the materials previously developed by other researchers. When you read a research article, there will sometimes be an appendix containing the materials. This usually means that you are able to use them yourself without any special permission, but always check with your supervisor.

If this is not the case, you could try getting in touch with the authors of the article, politely asking them about the availability of their materials. Look at the list of authors at the head of the piece. Normally, the first author is the one you should try to contact, and it will usually be indicated if not. If an e-mail address is not given, you can probably track the authors down via the internet, because you will certainly know where they are based (unless they have moved on since the article was published). If you write to them, do so with respect and politeness, and mention that you are a student. Ask them if their materials are 'in the public domain' and, if so, whether they will allow you to use them. If you are lucky, they'll send you what you need. You might even find that they are interested in your results. Make sure that you thank them in your Acknowledgements section. Finally, show your supervisor the e-mail you intend sending just in case there is any problem. (Now and then, supervisors prefer to make contact with the authors on your behalf. Don't be offended if this is the case. They might know the people concerned, and might want to phrase a letter to them in a particular way. After all, you probably wouldn't write a letter to your grandparents in the same style as one to an old friend.)

## THE INTERNET AS A RESEARCH TOOL

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It is becoming increasingly popular for people to use the internet as a place for hosting surveys, in order to maximise response rates and generate a wider and more representative sample. Psychologists are in debate over the validity of using the internet for research. My own advice is that generally you should not use it, because I believe that

the problems outweigh the benefits. There are a few issues you must consider before uploading your survey questionnaires:

- Don't put anything out there which requires a timed response. Too much relies on the timing of internet connections rather than the actual response times of the participants.
- Be aware that internet users are a restricted sample of the general public, despite the fact that the internet is becoming increasingly commonplace. The oldest and poorest people in society are the least likely to have internet access. Furthermore, internet users who have managed to stumble on to your survey and then agree to fill it in are an even more specific subset of the population.
- Be prepared to accept that some people are just awkward and like to ruin research for the sake of it. Hackers may take pleasure from breaking into your html code and spoiling things, some people will complete your survey a number of times under different names, and some people will give ridiculous answers because it amuses them. People can just as easily 'spoil' a pen-and-paper version, although the anonymity of the internet is more likely to encourage this. People tend to take you more seriously if you have handed them a questionnaire personally.
- One of the biggest problems with web-based instruments is that they need to be somewhere on the internet where people will actually encounter them. Even then there is no guarantee that they will take part. Unless you have access to some popular internet site (perhaps your friend runs a site which clocks up thousands of hits per day and on which they are happy to host your questionnaire), you should think about the amount of work you would have to put in to create an online questionnaire which no-one might ever find!

My best suggestion to get around most of these problems is this: You should not rely solely on the internet, but conduct a pen-and-paper survey as well. Then, when the data are in, compare the two forms, checking your survey item by item, running statistical tests to see if the internet version is significantly different from the pen-and-paper one. If the responses match up, then you can consider adding the lot together and working on it as if everything had been from a single source. If you find that the answers are often quite different, you must consider trusting the pen-and-paper one more.

## MANAGING TIME: KEEPING ON TRACK

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One of the biggest problems students face when engaging with research is managing their time so that deadlines are met and the research does not spill over into other things. Even when your department is happy to provide you with an extension for your project, you might find that this means that there is less time for you to get ready for your final examinations. Therefore, it is important that you avoid, wherever possible, having to ask for extensions to deadlines. Plan your time carefully, and the time will serve you well.

### ***Start early***

The most important advice you can be given is to start early. Usually, you have a whole summer before you must get started on your project. If you can make good use of that time, you will have a head start on other students in your year, most of whom don't really get going until the early months of the academic year. Even when your lecturers try to get you thinking about your project early (such as at the end of your penultimate year), many students still hold back and leave things until the final year begins.

### ***Match the project to the time available***

Most students have around six months to complete a project. Obviously, this is the figure you need to start with. Therefore, many longitudinal projects are ruled out because of this. If you trim the six months to include time for planning, piloting, analysis and writing up, you can be left with as little as three months to actually conduct the research. This means that there is a severe limitation on any longitudinal work you intend to do. If you are following up participants every week for three months, you end up with 12 points of data collection, which is probably fine. However, if you intend collecting data on something which might change very slowly over time, you could find that nothing is likely to happen even in three whole months. If that's a likely outcome, then the research simply can't be done in the time-scale you have available and you need to rethink. For the vast majority of student projects, however, including those with a longitudinal

focus, three months is probably long enough to get a decent piece of research work done. One thing is certain, though; if you drag your heels it won't be.

## ***Overplanning***

Research almost always takes longer than you think. It is best, therefore, to overplan your time. By this, I mean that you should build some slack into your schedule. Expect things to go wrong, or data collection to hit an obstacle and slow down, and make allowance for this to happen. So, you will need to build in around 10 to 20 per cent additional time. You might not need it, but the worst that can happen if you don't is that you will finish early. If you don't expect things to go wrong, you'll be scrambling around towards the deadline.

In practice, this additional time must be shaved off the six months or so that you have. Six months is 24 weeks. A tenth of six months is nearly two-and-a-half weeks. As a minimum, in this case, you need to plan as if you had 21.5 weeks. If you are in any doubt yourself about access to participants, or if you know that you struggle with statistics, or if you are quite slow when it comes to writing up, I recommend that you build in the full 20 per cent of emergency time. That works out at almost five weeks. Therefore, plan for a project that you can conduct and complete within 19 weeks. This sounds dramatic, and depressing, but you can't always predict what might go wrong. It is better to be ready for an emergency than to risk making a mess of something really important to you.

## ***Plan B***

If you have any worries about how the project might pan out, then you should consider having a Plan B. Sometimes you are relying on someone else or another organisation to help you have access to participants. Therefore, some of the things that could go wrong could be out of your hands. If your access to participants falls through, or if you don't find enough people to take part because of the nature of the study, you might need to cut your losses and switch plans. Plan B should not be a completely different project, but a new version of the original which might not be as interesting to you but is more likely to succeed in a short time. You should try to construct a

Plan B which will mean that your literature searching is not wasted because you can use all of the same articles in your introduction. The theory should not dramatically change, just the nature of the data-collection process. A standard way to create a Plan B is to alter your study into a study of attitudes. Imagine that you wanted to look at coping strategies in people with cystic fibrosis (CF). Then you find that you won't be able to find enough people with CF to take part because of some practical obstacle. Instead, you could ask people who don't have the illness about how they would cope if it affected them. You give them information about the condition, and then they are asked about how they imagine they would deal with it themselves. There are all sorts of possibilities as to how you could then set about looking at this data. It's not ideal, but it's something you can get a project out of. Yes, it's true that there is a big difference between facing CF in your life and trying to imagine what you might feel like. In fact, these two things are worlds apart, but better that than you waste a lot of time and effort and be left with absolutely nothing at the end of it all.

If you have *some* people with CF involved in your study, but don't feel that you have enough, you can always shift the focus slightly into comparing two conditions. What you might do is find some other medical condition or illness which shares some characteristics with CF but is different in some key aspect, and then make your study one of comparison of coping in two different conditions. For example, CF is primarily something which affects the lungs, and so you might find another lung disease, such as emphysema, and then identify some relevant participants that way. As long as you have been prepared for this possibility all along you should find this a feasible way to proceed. Do note, however, that you will probably need ethical approval all over again should you switch to a Plan B.

Although it is not ideal, you can often consider adding a qualitative element to a quantitative project, or vice versa. Occasionally, it can be quite enlightening if you see that your results seem to hold true even when you change the method. If you have conducted a questionnaire survey, you can consider adding an interview or two exploring the same issues but in more depth. It would be highly unusual to add a quantitative element to a qualitative project, and many psychologists would strongly object to this, so if you consider this you must

do so very carefully and only in consultation with your supervisor. In the case of qualitative projects, a better Plan B might be to revisit the people that you have interviewed and follow up specific points in an additional interview. You are much more likely to be able to follow up your participants than you are to find new ones.

Note that these are plans which should only be put in place if you are desperate because things have gone wrong. You should not resort to these unless you really need to.

## ***Response rates***

If you are using questionnaires, you will need to plan your time and resources around likely response rates, especially if you are expecting replies by post. For example, you might be sending out questionnaires with the newsletter of an organisation from whom you have permission. You hope that the members will fill them in and send them back to you. First, you must give people a long time to do this. Even though people may have the best of intentions, they can often forget about something for months on end. Second, you should be ready to spend/waste a lot of money on photocopying questionnaires which will never be returned to you. A truly excellent response rate for questionnaires by post is around 50 per cent. Some studies actually end up with a return of less than one-tenth. So, realistically, you ought to expect around a third to come back to you, depending upon the nature of the questionnaire and the nature of the people to whom you are sending it. If you are targeting members of an automobile club with a questionnaire about driving behaviour you can expect a much higher rate than if you are asking members of a chess club to fill in questionnaires about their eating habits or their attitudes towards building development on 'brownfield' sites. Therefore, generally, print and send out 300 questionnaires for every 100 you want back. If you are sending out questionnaires cold, that is to people who have not shown any interest in your study in any way, then you will be lucky if you get five back out of every hundred, which means that this is not a practicable method at all.

Now, here's something for you to ponder. According to Sommer and Sommer (2002, p. 151): 'Some market researchers believe that a stamp placed at a slight angle on the envelope increases the return rate.'

## ***Your supervisor's time***

Many students have a tendency to forget, sometimes, that their supervisor has demands on his or her time as well. In an average university, a project supervisor is usually working with a number of students on their projects. In addition, your supervisor is likely to be involved in teaching, preparing materials for various courses or modules, writing, and research; may have doctoral students to supervise, meetings to attend, marking to do, new courses to develop, involvement with their professional body, and external examining commitments to fulfil at other universities. They also have to sleep and find time to take their holidays. As a result, you need to plan your use of their time as much as your own. Make appointments with your supervisor well in advance. Don't forget to attend them, and if you need to cancel, again do so in plenty of time, as a matter of courtesy. Your demands on your supervisor's time tend to be quite predictable; generally you will need quite a bit of their time when you are planning the research, much less once you are collecting data, and then a sizeable chunk of your time allowance will be used up when you are understanding your data and analysis and writing up. Therefore, plan accordingly. Remember, too, that when you most need your supervisor, that is, in the last few weeks before handing in your completed project, they will be trying to fit in all of their other equally frantic students as well. If you leave things to the last minute, you may well find that your supervisor cannot find the time to see you because other people have used up their time. To avoid this, you must have a very good idea of when you will need your supervisor and you should try to make appointments which match your predictions.

## ***Project milestones***

You might not be familiar with something called a Gantt chart. Essentially, it is a map of time. Table 1.1 is an example of a small one. It should be obvious at a glance what it tells you. When you start your research, create one and show it to your supervisor, who can then (a) check that you do have a realistic time plan and (b) be impressed because you are organised!

Different types of project will usually require completely different Gantt charts, because some research is 'data collection heavy' whilst being 'analysis light'. Other types of research are just the opposite.

**Table 1.1** *A fictitious research project Gantt chart.*

	<b>October</b>	<b>November</b>	<b>December</b>	<b>January</b>	<b>March</b>	<b>April</b>
Planning						
Piloting						
Writing 'Introduction'						
Writing 'Method'						
Writing 'Discussion'						
Data collection						
Analysis						

Usually, this is the big difference between quantitative and qualitative work. Interviewing a handful of people can be very quick and easy if you are good at it, but transcribing and coding the interviews is long-winded and time-consuming. However, collecting data from hundreds of participants in a quantitative study can take hundreds of hours, while the analysis can take seconds using a computer program.

***Tips on managing time***

There are entire books and management courses devoted to managing time. It never fails to amuse me that the biggest problem in managing my own time always seems to be that I never have the time to sit down and methodically manage my time. However, your project is very important to you, and so you should consider sparing an hour or so to put your working life in order and make sure that your academic year does not speed past you, leaving you wondering where it all went.

- Break the writing-up into small chunks and deal with each separately. This is easy to do because research is reported in sections anyway.
- Make a list of things to do. Some people do this daily, but weekly will usually suffice. Cross things off as you do them and notice how much better you feel as the list for the week starts to shrink.

- Don't stare at a pile of work or list of chores and depress yourself with how big it is. Mountain climbers work in stages. A walk around the earth begins with the first step. If you feel overwhelmed by things to do, do some of them and you will have made a start. You will feel better. Just don't see your list of tasks as a great monster staring at you; it's really just a crowd of tiny monsters!
- Start tackling a list of chores by choosing the most pleasurable or easiest of them and getting that out of the way. Then deal with the worst one after you have warmed up, leaving some more of the easier tasks to deal with at the end when you are more tired.
- Plan breaks in your work time. Not only should you aim to have a day off every now and then, but you should also plan to have smaller breaks regularly throughout the working day. If you are stumped by a problem, or if you have writer's block, a small break will often help and the problem sometimes goes away just because you have taken a rest.
- Try to estimate how long everything you have to do will take you, and then keep your eye on the clock. You will often be surprised at how wrong you are about how long things take. Many things look as if they might take hours and are done in minutes, but the converse also applies.
- Although not everyone is the same, most people have a couple of peak periods for work each day, and a couple of lulls when they are at their worst. Usually, the lulls come after lunch (for biological reasons) and early in the morning (when the body and mind are still waking up). The peaks tend to be in the late morning and the late afternoon/early evening. Find out when your peaks and troughs are. Then make sure that you tackle difficult tasks in your peaks, and save the mundane, mindless tasks for your troughs.
- Clear your desk regularly. Scraps of paper not only get in the way of the things you actually need, they also make you feel as if things are in a mess.
- Don't throw anything away until your project is completely finished and you are certain that you won't need it again. File everything away for the time being.

- Don't stress yourself over the fact that time is ticking away. Everyone conducting a research project in your year is working to the same schedule, and time is very fair; a minute is the same length for everyone.
- Give yourself a treat at the end of a long working day. Whether you have a chocolate bar in the cupboard, or a film to watch, you will have something to look forward to.

### **A student says . . .**

My advice to anyone embarking on a final-year psychology project is to do something that matters; and then, throughout your time working on it, make that work matter. Based on my own experience, I will set out some of the ways I think that can be achieved and the difference I believe it will make not only to the piece of work you hand in at the end, but to the less tangible products of your endeavours: the ways you develop, academically and personally. In psychology it seems especially pertinent to remember that whatever you work on, you are always also working on yourself.

First, discard any notion that this is only about learning how to do research; that it is an empty exercise for the sake of your education. Set aside thoughts that it is simulated, pretend research and you cannot possibly expect to do the 'real thing'. Make it real. Yes, you are only learning, but that need not constrain what you aspire to. So adopt the approach that you are going to conduct research that matters. I can attest to the difference that makes when carrying out a laborious task like spending hours entering numbers into a computer or, as was the case for me, transcribing interviews – because it means you actually care about the findings emerging from your data. Even more importantly, you are then not only learning all the techniques needed to carry out research, but you are learning to do something worth doing and care about doing it.

Second, look for what an entrepreneur would call a 'gap in the market' – and just as with business, that means not only providing something nobody else is, but also ensuring there's

*(Continued)*

a demand for it. Here, 'demand' translates as the value of what you would be doing. Thus, look for something to investigate that hasn't been done, but be sure that is because nobody has got round to it or even thought of it, not because it really isn't very worthwhile.

However, if you are to take on the mantle of a seasoned psychologist in the way I am suggesting, you need to find a way to make up for not yet having developed expertise in the area. So use what you know. That might be another subject you've studied, experience you've had, or something to do with you that gives you an especial insight; for me, it was all three. It makes what you do relevant to you and ensures you are contributing what, perhaps, nobody else could. In terms of contribution, think also about the participants you recruit for your research. They are giving their time, and also giving something of themselves. That is true even for the most impersonal tasks we might ask of participants, while the people taking part in my research spoke about things that were very personal indeed. Together this meant something of value came both from my participants and from me, and I could take that and try to do justice to it.

Finally, allow your work to communicate effectively, and that may well mean making sacrifices. Consider the constraints imposed on you, such as the marking criteria and the word limit, and try to use them to your benefit. I found I was deleting cherished paragraphs to reduce my report to the required length; and, on the whole, I think it resulted in a better piece of work because it brought what was of most importance to the fore. Be prepared to accept advice about what you've written. Most of the advice I was given suddenly seemed 'obvious' as if it couldn't ever have been any other way, but without the advice the alterations I made couldn't have happened and the work I was able to submit would not have been as good. Actually, 'submit' is a particularly good word for what's involved, because it requires humility – a letting go, and submitting to the work to submit the best work you can.

## WRITING A PROPOSAL

It is common for students to be asked to write a proposal for their research, which may or may not contribute to the marks awarded to the project, or the proposal may be marked in its own right as a piece of work. Normally, a research proposal is nothing to be afraid of. If you can imagine writing a research report without the Results and Discussion sections, then you have a mental picture of what a proposal looks like. The only other real difference is that you will be writing about research to be conducted (future tense) rather than that which is now completed.



“MY INTERNET SEARCH  
SAID THIS WAS A BOOK  
ABOUT GROUNDED THEORY...”

A proposal is not a waste of time. It can help you to focus your ideas, but primarily can be the basis of your Introduction or Literature Review in your project proper. After all, if you have read dozens of articles to produce a rationale in your proposal, you can make use of that and tweak it to produce a real introduction to the research in your written-up project.

Commonly, proposals contain sections which might be labelled thus: Literature Review, Method, Proposed Analysis, Practical and Theoretical Applications, References. In the section that I have suggested could be called 'Practical Applications', you ought to explicitly state what the point of your study will be, that is what theories you will be adding to or rejecting and who is likely to benefit from your addition to knowledge. Remember to write the Methods of the proposal in the future tense, since you haven't started doing anything at this stage. This contrasts with using the past tense for a report write-up when the research is over.

## **RESEARCH ETHICS**

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Being a good psychology researcher means that you must have sensitivity to the rights and wrongs of conducting research with human participants. In some senses, ethics are the first hurdle of carrying out worthwhile research. Most people *think* that they have a good sense of ethics, but it isn't that simple. Just because something seems okay to you does not mean that it is. This is the reason why most research has to be considered for approval by an ethics committee of some sort who make a joint decision. By debate, different opinions on what is right and what is wrong are likely to be aired. Top ethics committees are usually made up of a selection of academics, religious leaders (priests, mullahs, rabbis, and so on), heads of consumer organisations or pressure groups, and members of the public. However, the majority of research that students are doing can be overseen by a much less formal committee, often made up of members of psychology staff.

There are many codes of conduct which set out guidelines for conducting research. In Britain, the most commonly followed by psychologists are those created by the British Psychological Society (BPS). If your research does not fit within the BPS's *Code of Conduct, Ethical*

*Principles & Guidelines* then you really will not be able to go ahead. Many if not all of your lecturers will be members of the BPS, and so are expected to work within these guidelines as a matter of professional honour. You can get a copy of these from the BPS directly, including online from [www.bps.org.uk](http://www.bps.org.uk). They are loosely summarised here for your convenience. You should be aware of these right from the start of your project, because they should guide your choice of topic and how you will go about conducting your research. *Note that this summary of some of the main points of the Code of Conduct does not constitute a replacement or equivalent to the original document, and you are strongly advised to read the source document before beginning an investigation. The points listed below are simply my explanation of the issues you must consider and, as such, the wording is not officially endorsed by the BPS. Furthermore, the guidelines on work with animals are not included here, since the vast majority of student projects do not involve animal work; indeed, such work is often not allowed in psychology departments today. If you are permitted to pursue a project involving non-human participants, make sure that you are following the BPS's Code of Conduct in this respect, and that you have also consulted widely in your department and have all of the appropriate permissions.*

## **Informed consent**

Consent is not really enough. You are expected to give people information as to what they are agreeing to participate in, in as much detail as possible. 'Do you mind taking part in my study?' is not acceptable in this day and age, even though in the past it often would have been! Ideally, you should provide potential participants with an information sheet, and you should obtain written consent, which you should witness by means of a countersignature.

If you are working with children, then parental, or *in loco parentis* consent, where applicable, must be obtained. The same would apply in the case of people who are unable to give consent because of mental illness or learning disability, for example.

In order for your consent to be 'informed' you should check that the following potential questions that a would-be participant might ask are answered in advance:

- What will I have to do?
- How long is it likely to take?

- What are the probable consequences of me taking part, in the short, medium and long term?
- What if I change my mind?
- What will happen to my data?
- Who will see my data?
- Which organisations have approved or condoned this research?
- Who can I speak to if I have questions or complaints?

Another aspect of consent revolves around how explicit or implicit the consent actually is. Explicit consent is exactly what it sounds like, which is directly asking people to take part, and getting their agreement specifically, usually in writing. Implicit consent is much more problematic. If you send someone a questionnaire, and they send it back filled in, this is implicit consent, since they could opt out by not returning it. However, most of the time this is not considered enough, because unless you directly ask them to participate, you haven't given them the 'rules' they are working to. Always seek to tell your participants what you need from them, and why, and seek also to get their written consent.

Some studies work on the basis of positive and negative consent options. This is essentially an opt-out. For example, let's imagine that you want to run a study in a school. You know that generally most parents are happy to let their children participate in research, but they are much less good at returning silly little consent slips. The Head of the school tells you this. So, you choose to write to all of the parents, saying that the study will be going ahead, and all children will be included unless they tell you to exclude their child. This is participation by default. Opting out requires some action on the part of the parent or guardian. Well, guess what? Convenient though that might be, it's really very problematic. I would say that you truly should NOT pursue such a course of action. The biggest issue is that you can't guarantee that every parent received your letter. Imagine that a parent discovered that their child had been involved in some research, and the parent complained. You say that you wrote to them, and that unless they opted out all children were included. The parent simply has to say 'I didn't get any letter.' To be honest, that doesn't even have to be true. The burden of proof would be on you to demonstrate that they DID receive the letter, and that they READ and UNDERSTOOD it, which you actually can't

do. You are in significant trouble already. Therefore, convenient though it might be, you need positive consent from your participants or their parents and guardians. There's no way around this.

### ***Undue pressure***

You must not put pressure on people to participate in your study. This includes even the mildest forms of persuasion. If someone declines to participate, you should not even say something like 'Aww. . . please. . . go on. . . it'll only take a few minutes.' Neither should you react impolitely to people who decline to participate in a rude fashion. If someone swears at you when you ask them to participate, just tell them that you are sorry to have bothered them and thank them for their time. Do not get into an argument with them, no matter what they say to you.

### ***Deception***

Sometimes no deception of the participants is necessary. If it is necessary due to the nature of the project, you should aim to keep the deception to a minimum, and you should explain the deception fully in the debrief. Not all deceptions are acceptable. There should be no foreseeable harm to participants leading from the deception, and you should aim to identify the likely outcomes of the 'temporary lie' that is involved. Imagine the likely reaction of your participants when you reveal the deception. If it is probably going to be something like 'Oh. . . I see. . . . That's interesting' then all should be well. If you conceivably expect any participants to be offended, or to feel cheated, or you have any reason to believe that your deception may lead to bringing psychology (or your university) into disrepute, then you must think about ways to completely avoid this situation. You should not proceed where there is any possibility that you will offend participants, or create distrust or ill feeling.

### ***Protection of participants from harm and 'acceptable' risk***

You should take every precaution to prevent any of your participants being subjected to harm, whether physical or psychological. Generally,

the rule of thumb to follow in determining whether your project is allowable is this: You should not do anything which would put your participants at greater risk from harm than they would normally be in their everyday lives.

### ***Incentives***

It is acceptable to provide incentives for people to participate in your research, which could take the form of a payment or a voucher, or a course credit, if your department operates such a scheme. However, you must never use an incentive to encourage participants to put themselves at risk in any way. This guidance is there to prevent poorer people from being coaxed into participation just because they need the money.

### ***Withdrawal***

You should ensure that a participant can withdraw from the investigation any time they wish, and that data which they have provided can also be removed upon request. If an individual's data cannot be identified after the collection process then you should explain this at the outset. It's perfectly fine to explain that once the data has been included in the study it can't be removed because it can't be identified. If it can't be identified, then the harm that the data could cause the participant is pretty much at zero. However, bear in mind that this can never apply to qualitative data, because the participant could always recognise their own words in the transcript of their own interview. They wouldn't recognise their own scores of 10.9 and 56.8 on two tests, or a reaction time of 395 milliseconds, but they would know what they'd said to you in an interview.

### ***Confidentiality***

You are under a legal obligation to protect the identities of your participants and to keep their data and/or personal details confidential. In practice, I would advise you never to ask for participants' names and other details unless you absolutely must, such as in cases where you need to contact them to arrange follow-up sessions. If you don't have the information, you don't need to worry about keeping it confidential.

Note that anonymity does not always guarantee confidentiality. Imagine where you have collected data from other students in your year. You have taken personal details, but not names. If you have a participant who is the only 48-year-old male on your course, or the only black female, or the only disabled person, those people could be identified by someone else quite easily. In such cases, you still need to be careful about protecting identities of participants.

## ***Debriefing***

An important part of the research process is the debriefing of participants. This is especially the case when some kind of mild deception is involved. One way to save time and to maximise the impact of the debriefing is to present a 'debriefing sheet' at the end, rather than explain everything over and over again to each participant. If you do this, however, make sure that there is some form of contact number or e-mail address available so that a person who has questions after reading their sheet can find you to ask them.

Never force a debrief on a participant. Sometimes people really don't care why you are doing what you are doing. They are quite willing to take part, but then want to dash off. If they don't want to be debriefed, it is their choice. However, use of a debriefing sheet also gets around this problem because they can take it away to read at their leisure.

## ***Personal safety***

One note of caution is necessary. Never give your address to participants, nor your home telephone number. Don't use a work e-mail address. In short, do not give personal details which could allow a participant to trace you. A mobile telephone number is generally safe, and if you want to give an e-mail address, set up an e-mail account with an established internet source. The best advice is to use your university department as a contact for you, provided that your supervisor agrees to this. Furthermore, do not meet potential participants in any place where you do not feel safe. If you are conducting work outside the laboratory, use public places where possible, and ensure that your mobile telephone is turned on (but with the ringer turned

off so as not to disturb your interview or test situation). Make sure also that a friend or family member knows where you are. Although you are extremely unlikely to encounter any problems, one can never rule out danger, even when you are acquainted with the people you are dealing with.

## **OBTAINING ETHICAL CLEARANCE**

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In all departments there will be some system of ethical clearance for student projects. You will be expected to gain approval before you can proceed. This system can vary considerably, from obtaining approval from your supervisor, to having all projects cleared by an ethics committee. Your department will advise on what you must do to satisfy any local conditions placed upon research at your university. Usually some paperwork will be necessary. Make sure that you fill in all forms carefully, and that any committee is given full information in order to make a decision. Note also that if you change your project for any reason, whether practical or otherwise, you will normally have to submit a new proposal for ethical clearance.

Sometimes, you will also have to obtain external ethical clearance, for example when you are intending to obtain access to patients in a hospital environment. Again, your supervisor will work with you to achieve this, but you must plan well in advance should this be necessary. Ethics committees attached to hospitals and the like sometimes only meet every few months. The paperwork usually has to be distributed to members of the committee a few weeks before they convene. This will often have to include copies of any questionnaires you might be using. If you are unlucky enough to have to wait a while until a meeting occurs, and your project is rejected because more information is needed, or things need to be modified, you might then have to resubmit to another future meeting. You can lose the whole of the time allotted to working on your project in this way. This is not intended to put you off proceeding with a good project which involves hospitals, clinics or schools, but to alert you to the fact that you must start very early indeed if you are relying upon an external committee to assess your research.

One of the main concerns of external ethics committees is that the work you are conducting is not just being done to help you achieve a degree. In the case of hospital-related ethics committees, their job is to protect patients from fatigue, anxiety, and the like. Hospitals are not there to help you conduct your research. In particular, you will not be allowed to conduct a project unless you can clearly demonstrate that your work will either have direct benefit to the patients taking part, or to future patients. It can be indirect, through the creation of useful knowledge, but there must be some obvious benefit which you should be spelling out clearly in your ethics forms. Research for research's sake is not allowable.

You will, if you are working with 'vulnerable' groups such as children, be expected to obtain clearance from the appropriate authorities. To protect these groups, a check on your personal circumstances (principally whether or not you have a police record in respect of certain types of criminal activities) is necessary. Your department will advise on this.

## GETTING STARTED

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When the planning is over, the fun starts. The research process *can* be fun, believe it or not, especially when you are finding something out that really interests you. Furthermore, psychology is about people. Therefore, conducting psychological research projects puts you into contact with people, and opens your eyes to the ways in which people think and behave. You meet people, and you learn about yourself. Part of studying to achieve a degree is about personal development, and nothing contributes to your personal development more than research. After all, research is a truly natural process which you have been engaging in implicitly since you were born. You live life constantly making theories about things, testing them out, and changing your theories in the light of evidence. Therefore, conducting research projects in psychology can be seen as just one more way in which you learn about how the world works and how you, as part of the world, contribute to that.

The final word of this chapter I will give over to Douglas Hofstadter. In his classic book *Gödel, Escher, Bach: An Eternal Golden Braid*, he refers to a law he created in his own name. It's Hofstadter's law, and it basically states that things take longer than you expect, even when you are taking Hofstadter's law into account. Think about this one. It's useful to bear this in mind when you are planning, but be careful you don't get too caught up in the wonderful circularity of it . . .