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# Preface

The original idea for an Australasian social psychology text was born at the annual conference of Australasian social psychologists in Ballarat, Victoria, in April 1991. We felt that there was an urgent need for a comprehensive introductory social psychology text written specifically for universities in Australia and New Zealand—a text that captured the scope and detail of contemporary social psychology as an international enterprise, but at the same time dealt with the subject in a way that was relevant to university teaching and social psychology research in Australia and New Zealand.

The first edition was published in 1995 and launched at a fine reception, sponsored by Prentice Hall Australia, in Hobart at the inaugural meeting of the Society of Australasian Social Psychologists. It was very successful. It received an award for excellence in the tertiary educational publishing sector and was quickly adopted and widely used at universities in Australia and New Zealand. We felt vindicated.

Subsequent editions followed fast upon earlier editions—no sooner did one edition appear in bookshops than, it seemed, we were hard at work preparing the next. The second edition was published in 1998 and introduced at the annual meeting of the Society of Australasian Social Psychologists in Christchurch. This edition was a relatively modest revision aimed primarily at improving layout and presentation, though the text and coverage were thoroughly updated, and we raised the profile of some applied topics in social psychology.

The third edition, published in 2002 and launched in Adelaide at the annual meeting of the Society of Australasian Social Psychologists, was short-listed for an award for excellence in tertiary education publishing. It represented a major revision to accommodate significant changes in the field since the first edition. The structure and approach remained the same but some chapters were dropped, some were rewritten, others were amalgamated, and some entirely new chapters were written. In addition, the text was updated and the layout and presentation significantly improved.

The fourth edition was published in 2005—it too was short-listed for an award for excellence in tertiary education publishing. This was a more modest revision aimed mainly at updating the field, and improving on

explication, pedagogy, and layout and presentation. The book had now graduated to glorious full colour. Most of the planning was done sitting at cafés and restaurants around the edge of Auckland's beautiful harbour, while the America's Cup was under way, with the authors looking for inspiration from the lovely yachts racing about us.

Following meetings between Graham and Mike in Noosa in 2004, and then Townsville in 2005, material for the fifth edition was thoroughly updated and some chapters and sections of chapters were significantly rewritten. The focus was on content and explication rather than pedagogy and layout. However, we retained the structure and approach of previous editions and framed it with the same scientific and educational philosophy.

The sixth edition, published in 2011, was again a relatively significant revision in which we thoroughly updated material to reflect changes in the field and renamed and repositioned some chapters. The book was planned and set in motion over a week in November 2007 when Graham and Mike holed-up in Mike's new home in the Santa Monica Mountains just outside Los Angeles. The book was written in late 2009 and early 2010 while Mike was in Los Angeles and Graham was in Auckland.

## The seventh edition

Although the fifth and sixth editions were both significant revisions, this seventh edition is also a relatively significant revision, in which we have focused on updating material to reflect important advances in the field (there are well over 250 new references) but have not made dramatic changes. We have retained the structure and approach of previous editions and the book is framed by the same scientific and educational philosophy as before. We have improved the narrative throughout; significantly rewritten large portions of text; updated real-world examples; provided new figures, boxes and photos; and, for the first time, have included an Advisory Editorial Board to cover Australian and New Zealand social psychology against a backdrop of our discipline. Specific changes include:

 coverage of social neuroscience and fMRI-based research and ideas where relevant

- significant revision of the culture chapter, Chapter 16
- more on affect, emotion and intergroup emotions
- revision and updating of material on correspondence bias, social representations, conspiracy theories, terror management theory and the social psychology of power
- increased coverage of social deviance, intergroup criticism, subjective group dynamics and ostracism
- updating of the leadership section to cover research on the glass cliff, innovation credit, dictatorial leadership, and social identity-based and intergroup leadership
- new coverage of 'culture of honour' and of critiques of social dominance theory
- significantly revised treatment of language and communication to update coverage of discourse and intergroup communication, and to build in fuller reference to social media and electronic communication.

To plan the structure of the book in detail, Mike visited Graham in Auckland for a week in December 2011 where he was greeted by a minor South Pacific storm—it rained torrentially and blew a gale continuously. No opportunity to venture out, so we got a lot of work done and were forced to hide out in classy cafés and restaurants overlooking Auckland's rain-soaked harbour and wind-blasted yachts. Mike finally escaped to California where he successfully evaded bushfires. When calm was finally restored in the second half of 2012, the writing itself began in earnest and was completed by Easter 2013.

Writing a big book like this is a courageous undertaking, with a great deal of drama and even more hard slog. We are delighted to acknowledge our wonderful publishing team at Pearson Australia, in particular Lucy Elliott, Katie Pittard, Sandra Goodall and Megan Retka-Tidd, and in the latter stages our eagle-eyed copy editor, Kathryn Lamberton. Their dedication to the job and good humour helped us through. As always, we thank those close to us—our family, friends and colleagues—for their patience and support. The most special thanks go to our partners, Jan and Alison. Mike would also like to mention his kids—Jessica, James, Samuel and Joseph—who, with university beckoning, might even encounter this book!

# How to use this book

This seventh edition is a completely up-to-date and comprehensive coverage of social psychology as an

international scientific enterprise, written from the perspective of European social psychology and located in the cultural and educational context of people living in Australia and New Zealand.

The book has a range of pedagogical features to facilitate independent study. At the end of Chapter 1 we outline important primary and review sources for finding out more about specific topics in social psychology. Within the chapters some material appears in labelled boxes: many boxes are labelled research highlight and others describe a research classic. To capture social psychology's relevance in applied settings such as the study of organisations, health-related behaviour and the criminal justice system there are research and applications boxes. Our final category of box is called real world to illustrate the operation of social psychological principles in everyday life, or in wider sociopolitical or historical contexts.

Each chapter opens with a table of contents and some focus questions that help you think about the material, and closes with a detailed summary of the chapter contents, a list of key terms, some guided questions and a fully annotated list of further reading. At the end of each chapter we also have a section called *Literature*, *film and TV*. Social psychology is part of everyday life—so, not surprisingly, social psychological themes are often creatively and vividly explored in popular media. The *Literature*, *film and TV* section directs you to some classic and contemporary works we feel have a particular relevance to social psychological themes.

As with the earlier editions, the book has a logical structure, with earlier chapters leading into later ones. It is not essential to read the book from beginning to end—the chapters are carefully cross-referenced so that, with a few exceptions, chapters or groups of chapters can be read independently in almost any order.

However, some chapters are better read in sequence. For example, it is better to read Chapter 5 before tackling Chapter 6 (both deal with aspects of attitudes), Chapter 8 before Chapter 9 (both deal with group processes), and Chapter 10 before Chapter 11 (both deal with intergroup behaviour). It may also be interesting to reflect back on Chapter 4 (the self) when you read Chapter 16 (culture). Chapter 1 describes the structure of the book, why we decided to write it and how it should be read—it is worthwhile reading the last section of Chapter 1 before starting later chapters. Chapter 1 also defines social psychology—its aims, its methods and its history. Some of this material might

benefit from being reread after you have studied the other chapters and have become familiar with some of the theories, topics and issues of social psychology.

The primary target of our book is the student, though we intend it to be of use also to teachers and researchers of social psychology. We will be grateful to any among you who might take the time to share your reactions with us.

Graham Vaughan, Auckland Michael Hogg, Los Angeles April 2013

# Advisory editorial board

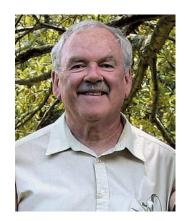
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# About the authors

Graham Vaughan has been a Fulbright Fellow and Visiting Professor at the University of Illinois at Champaign-Urbana; a Visiting Lecturer and a Ford Foundation Fellow at the University of Bristol; a Visiting Professor at Princeton University; a Visiting Directeur d'Etudes at the Maison des Science de l'Homme, Paris; a Visiting Senior Fellow at the National University of Singapore; a Visiting Fellow at the University of Queensland; and a Visiting Fellow at Churchill College, Cambridge. As Professor of Psychology at the University of Auckland, he served twelve years as Head of Department; he also established both a behavioural science program for medical students and the original social psychology program for psychology students there. He is an Honorary Fellow and past President of the New Zealand Psychological Society, and a past President of the Society of Australasian Social Psychologists. Graham Vaughan's primary areas of interest in social psychology are attitudes and attitude development, group processes and intergroup relations, ethnic relations and identity, culture, and the history of social psychology. He has published widely on these topics. His 1972 book, Racial issues in New Zealand, was the first to deal with ethnic relations in that country. Recent books include the new Essentials of social psychology (2010) with Michael Hogg.



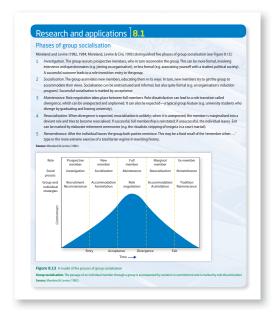
Michael Hogg is Professor of Social Psychology at Claremont Graduate University, in Los Angeles; an Honorary Professor of Social Psychology at the University of Queensland and the University of Kent; and President of the Society of Experimental Social Psychology. Educated in the UK, he received his PhD from Bristol University where he also taught for a number of years. After moving to Australia he taught at Macquarie University, Melbourne University and the University of Queensland. He also spent a year at Princeton University. He is a Fellow of numerous scholarly societies including the Academy of the Social Sciences in Australia, the Association for Psychological Science, the Society for Personality and Social Psychology and the Society for the Psychological Study of Social Issues. He was the 2010 recipient of the Carol and Ed Diener Award in Social Psychology from the Society for Personality and Social Psychology. His research focuses on group behaviour, intergroup relations and social identity processes; with a specific interest in uncertainty and extremism, and processes of influence and leadership. In addition to publishing more than 300 scientific books, chapters and articles, Mike is foundation editor with Dominic Abrams of the journal Group Processes and Intergroup Relations, and a past associate editor of the Journal of Experimental Social Psychology. Two of his books are citation classics, Rediscovering the Social Group (1987) with John Turner and others, and Social Identifications (1988) with Dominic Abrams. Recent books include the Encyclopedia of group processes and intergroup relations (2010) with John Levine, and Extremism and the psychology of uncertainty (2012) with Danielle Blaylock.



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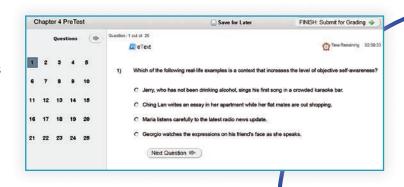
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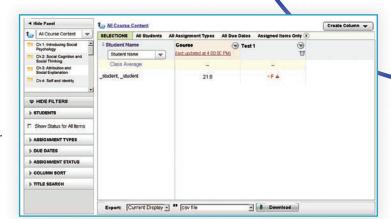


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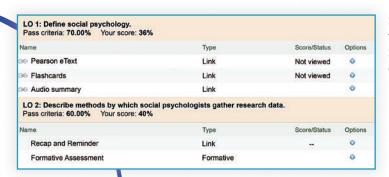
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# Chapter

# Introducing social psychology

### **CHAPTER CONTENTS**

#### What is social psychology?

Social psychology and its close neighbours Topics of social psychology

#### **Methodological issues**

Scientific method Experiments Non-experimental methods Data and analysis

#### Research ethics

Physical welfare of participants Respect for privacy Use of deception Informed consent Debriefing

#### Theoretical issues

Theories in social psychology Social psychology in crisis? Reductionism and levels of explanation

#### Historical context

Social psychology in the 19th century The rise of experimentation Later influences The journals

#### Social psychology in Australia and New Zealand

Its origins Later trends

#### **About this book**

## **FOCUS QUESTIONS**

- Would it ever be ethically acceptable to conceal aspects of the true purpose and nature of a psychology experiment from someone volunteering to take part?
- How complete an explanation of social behaviour do you think evolution provides? See students describe qualities with evolutionary significance that they would look for in a mate in the video *Choosing a mate* (go to Student resources > Chapter 1 of MyPsychLab at www.pearson.com.au/ vauqhan7).
- Many social psychology texts give the impression that social psychology is an American discipline. Do you have a view on this?



# What is social psychology?

Social psychology has been defined as 'the scientific investigation of how the thoughts, feelings and behaviours of individuals are influenced by the actual, imagined or implied presence of others' (G. W. Allport, 1954a, p. 5). But what does this mean? What do social psychologists actually do, how do they do it, and what do they study?

Social psychologists are interested in explaining human behaviour and generally do not study animals. Some general principles of social psychology may be applicable to animals, and research on animals may provide evidence for processes that generalise to people (e.g. social facilitation—see Chapter 8). Furthermore, certain principles of social behaviour may be general enough to apply to humans and, for instance, other primates (e.g. Hinde, 1982). As a rule, however, social psychologists believe that the study of animals does not take us very far in explaining human social behaviour, unless we are interested in its evolutionary origins (e.g. Neuberg, Kenrick & Schaller, 2010; Schaller, Simpson & Kenrick, 2006).

Social psychologists study **behaviour** because behaviour can be observed and measured. However, behaviour refers not only to obvious motor activities (such as running, kissing, driving) but also to more subtle actions such as a raised eyebrow, a quizzical smile or how we dress, and, critically important in human behaviour, what we say and what we write. In this sense, behaviour is publicly verifiable. However, the meaning attached to behaviour is a matter of theoretical perspective, cultural background or personal interpretation.

Social psychologists are interested not only in behaviour, but also in feelings, thoughts, beliefs, attitudes, intentions and goals. These are not directly observable but can, with varying degrees of confidence, be inferred from behaviour; and to a varying extent may influence or even determine behaviour. The relationship between these unobservable processes and overt behaviour is in itself a focus of research; for example, in research on attitude-behaviour correspondence (see Chapter 5) and research on prejudice and discrimination (see Chapter 10). Unobservable processes are also the psychological dimension of behaviour, as they occur within the human brain. However, social psychologists almost always go one step beyond relating social behaviour to underlying psychological processes—they almost always relate psychological aspects of behaviour to more fundamental cognitive processes and structures in the human mind and sometimes to neuro-chemical processes in the brain (see Chapter 2).

What makes social psychology *social* is that it deals with how people are affected by other people who are physically present (e.g. an audience—see Chapter 8) or who are imagined to be present (e.g. anticipating performing in front of an audience), or even whose presence is implied. This last influence is more complex and addresses the fundamentally social nature of our experiences as humans. For instance, we tend to think with words; words derive from language and communication; and language and communication would not exist without social interaction (see Chapter 15). Thought, which is an internalised and private activity that can occur when we are alone, is thus clearly based on implied presence. As another example of implied presence, consider that most of us do not litter, even if no one is watching and even if there is no possibility of ever being caught. This is because people, through the agency of society, have constructed a powerful social convention or norm that proscribes such behaviour. Such a norm implies the presence of other people and 'determines' behaviour even in their absence (see Chapters 7 and 8).

Social psychology is a science because it uses the scientific method to construct and test theories. Just as physics has concepts such as electrons, quarks and spin to explain physical phenomena, social psychology has concepts such as dissonance, attitude, categorisation and identity to explain social psychological phenomena. The scientific method dictates that no theory is 'true' simply because it is logical and seems to make sense. On the contrary, the validity of a theory is based on its correspondence with fact. Social psychologists construct

#### Social psychology

Scientific investigation of how people's thoughts, feelings and behaviour are influenced by the actual, imagined or implied presence of others.

#### Behaviour

What people actually do that can be objectively measured.

#### Science

Method for studying nature that involves the collecting of data to test hypotheses.

#### Theory

Set of interrelated concepts and principles that explain a phenomenon.

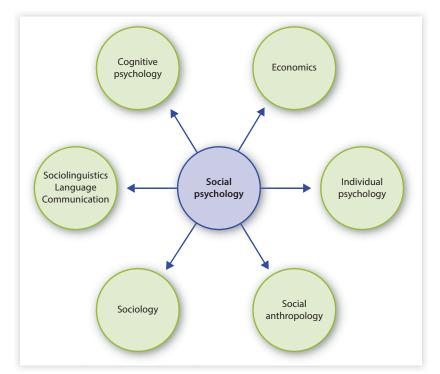
theories from **data** and/or previous theories and then conduct empirical research, in which data are collected to test the theory (see below).

# Publicly verifiable observations

## Social psychology and its close neighbours

Social psychology is poised at the crossroads of a number of related disciplines and subdisciplines (see Figure 1.1). It is a subdiscipline of general psychology and is therefore concerned with explaining human behaviour in terms of processes that occur within the human mind. It differs from individual psychology in that it explains *social* behaviour, as defined in the previous section. For example, a general psychologist might be interested in perceptual processes that are responsible for people overestimating the size of coins. However, a social psychologist might focus on the fact that coins have value (a case of implied presence, because the value of something generally depends on what others think), and that perceived value might influence the judgement of size. A great deal of social psychology is concerned with face–to–face interaction between individuals or among members of groups, whereas general psychology focuses on people's reactions to stimuli that do not have to be social (e.g. shapes, colours, sounds).

The boundary between individual and social psychology is approached from both sides. For instance, having developed a comprehensive and highly influential theory of the individual human mind, Sigmund Freud set out, in his 1921 essay 'Group psychology and the analysis of the ego', to develop a social psychology. Freudian, or psychodynamic, notions have left an enduring mark on social psychology (Billig, 1976), in particular in the explanation of prejudice (see Chapter 10). Since the late 1970s, social psychology has been strongly influenced by cognitive psychology, in an attempt to employ its methods (e.g. reaction time) and its concepts (e.g. memory) to explain a wide range of social behaviours. In fact, what is called social cognition (see Chapter 2) is the dominant approach in contemporary social psychology (Fiske & Taylor, 2008; Moskowitz, 2005; Ross, Lepper & Ward, 2010), and it surfaces in almost all areas of the discipline (Devine, Hamilton & Ostrom, 1994). In recent years, the study of brain biochemistry and neuroscience (Gazzaniga, Ivry & Mangun, 2009) has also influenced social psychology (Lieberman, 2010).



**Figure 1.1** Social psychology and some close scientific neighbours

Social psychology draws on a number of subdisciplines in general psychology for concepts and methods of research. It also has fruitful connections with other disciplines, mostly in the social sciences.



Conformity Norms govern the attitudes and behaviour of group members. These tennis fans not only dress similarly but also share a belief in Roger Federer ... at least for now

Social psychology also has links with sociology and social anthropology, mostly in studying groups, social and cultural norms, social representations, and language and intergroup behaviour. In general, sociology focuses on how groups, organisations, social categories and societies are organised, how they function and how they change. The unit of analysis (i.e. the focus of research and theory) is the group as a whole rather than the individual people who make up the group. Sociology is a *social science* whereas social psychology is a *behavioural science*—a disciplinary difference with far-reaching consequences for how one studies and explains human behaviour.

Social anthropology is much like sociology but historically has focused on 'exotic' societies (i.e. non-industrial tribal societies that exist or have existed largely in developing countries). Social psychology deals with many of the same phenomena but seeks to explain how individual human interaction and human cognition influence 'culture' and, in turn, are influenced or constructed by culture (Heine, 2012; Smith, Bond & Kağitçibaşi, 2006; see also Chapter 16). The unit of analysis is the individual person within the group. In reality, some forms of sociology (e.g. microsociology, psychological sociology, sociological psychology) are closely related to social psychology (Delamater & Ward, 2013). There is, according to Farr (1996), a sociological form of social psychology that has its origins in the *symbolic interactionism* of G. H. Mead (1934) and Herbert Blumer (1969).

Just as the boundary between social and individual psychology has been approached from both sides, so has the boundary between social psychology and sociology. From the sociological side, for example, Karl Marx's theory of cultural history and social change has been extended to incorporate a consideration of the role of individual psychology (Billig, 1976). From the social psychological side, intergroup perspectives on group and individual behaviour draw on sociological variables and concepts (Hogg & Abrams, 1988; see also Chapter 11). Contemporary social psychology abuts sociolinguistics and the study of language and communication (Giles & Coupland, 1991; see also Chapter 15), and even literary criticism (Potter, Stringer & Wetherell, 1984). It overlaps with economics, where behavioural economists have recently 'discovered' that economic behaviour is not rational, because people are influenced by other people—actual, imagined or implied (Cartwright, 2011). Social psychology also draws on and is influenced by applied research in many areas, such as sports psychology, health psychology and organisational psychology.

Social psychology's location at the intersection of different disciplines is part of its intellectual and practical appeal. However, it is also a cause of debate about what precisely constitutes social psychology as a distinct scientific discipline. If we lean too far towards individual cognitive processes, then perhaps we are pursuing individual psychology or cognitive psychology. If we lean too far towards the role of language, then perhaps we are being scholars of language and communication. If we overemphasise the role of social structure in intergroup relations, then perhaps we are being sociologists. The issue of exactly what constitutes social psychology provides an important and ongoing metatheoretical debate (i.e. a debate about what sorts of theories are appropriate for social psychology), which forms the background to the business of social psychology.

## Topics of social psychology

One way to define social psychology is in terms of what social psychologists study. This book is a comprehensive coverage of the main phenomena that social psychologists study now and

have studied in the past. As such, social psychology can be defined by the contents of this and other books that present themselves as social psychology texts. A brief look at the contents of this book will give a flavour of the scope of social psychology. Social psychologists study an enormous range of topics, including conformity, persuasion, power, influence, obedience, prejudice, prejudice reduction, discrimination, stereotyping, bargaining, sexism and racism, small groups, social categories, intergroup relations, crowd behaviour, social conflict and harmony, social change, overcrowding, stress, the physical environment, decision making, the jury, leadership, communication, language, speech, attitudes, impression formation, impression management, self-presentation, identity, the self, culture, emotion, attraction, friendship, the family, love, romance, sex, violence, aggression, altruism and prosocial behaviour (acts that are valued positively by society).

One problem with defining social psychology solely in terms of its topics is that this does not properly differentiate it from other disciplines. For example, 'intergroup relations' is a focus not only of social psychologists but also of political scientists and sociologists. The family is studied not only by social psychologists but also by clinical psychologists. What makes social psychology distinct is a combination of *what* it studies, *how* it studies it and what *level of explanation* is sought.

# Methodological issues

### Scientific method

Social psychology employs the scientific method to study social behaviour (Figure 1.2). Science is a *method* for studying nature, and it is the method—not the people who use it, the things they study, the facts they discover or the explanations they propose—that distinguishes science from other approaches to knowledge. In this respect, the main difference between social psychology and, say, physics, chemistry or biology is that the former studies human social behaviour, while the others study non-organic phenomena and chemical and biological processes.

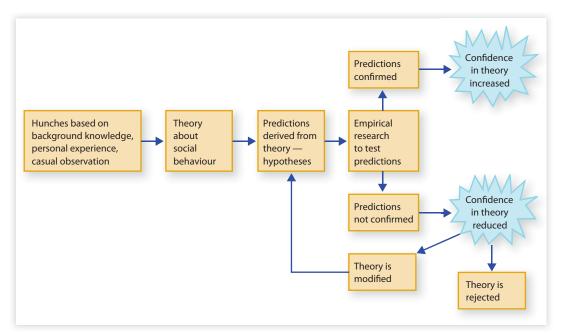


Figure 1.2 A model of the scientific method employed by social psychologists

#### Hypotheses

Empirically testable predictions about what co-occurs with what, or what causes what.

Science involves the formulation of hypotheses (predictions) on the basis of prior knowledge, speculation and casual or systematic observation. Hypotheses are formally stated predictions about what factor or factors may cause something to occur; they are stated in such a way that they can be tested empirically to see if they are true. For example, we might hypothesise that ballet dancers perform better in front of an audience than when dancing alone. This hypothesis can be tested empirically by assessing their performance alone and in front of an audience. Strictly speaking, empirical tests can falsify hypotheses (causing the investigator to reject the hypothesis, revise it or test it in some other way) but not prove them (Popper, 1969). If a hypothesis is supported, confidence in its veracity increases and one may generate more finely tuned hypotheses. For example, if we find that ballet dancers do indeed perform better in front of an audience, we might then hypothesise that this occurs only when the dancers are already well rehearsed; in science-speak, we have hypothesised that the effect of the presence of an audience on performance is conditional on (moderated by) the amount of prior rehearsal. An important feature of the scientific method is replication: it guards against the possibility that a finding is tied to the circumstances in which a test was conducted. It also guards against fraud.

The alternative to science is dogma or rationalism, where understanding is based on authority: something is true because an authority (e.g. the ancient philosophers, religious scriptures, charismatic leaders) says it is so. Valid knowledge is acquired by pure reason and grounded in faith: that is, by learning well, and uncritically accepting and trusting, the pronouncements of authorities. Even though the scientific revolution, championed by such people as Copernicus, Galileo and Newton, occurred in the 16th and 17th centuries, dogma and rationalism still exist as influential alternative paths to knowledge.

As a science, social psychology has at its disposal an array of different methods for conducting empirical tests of hypotheses. There are two broad types of method, *experimental* and *non-experimental*: each has its advantages and its limitations. The choice of an appropriate method is determined by the nature of the hypothesis under investigation, the resources available for doing the research (e.g. time, money, research participants) and the ethics of the method. Confidence in the validity of a hypothesis is enhanced if the hypothesis has been confirmed a number of times by different research teams using different methods. Methodological pluralism helps to minimise the possibility that the finding is an artefact of a particular method, and replication by different research teams helps to avoid **confirmation bias**—which occurs when researchers become so personally involved in their own theories that they lose objectivity in interpreting data (Greenwald & Pratkanis, 1988; Johnson & Eagly, 1989).

#### **Confirmation bias**

The tendency to seek, interpret and create information that verifies existing explanations for the cause of an event.

## Independent variables

Features of a situation that change of their own accord, or can be manipulated by an experimenter to have effects on a dependent variable.

# Dependent variables

Variables that change as a consequence of changes in the independent variable.

## **Experiments**

An experiment is a hypothesis test in which something is done to see its effect on something else. For example, if I hypothesise that my car greedily guzzles too much petrol because the tyres are under-inflated, then I can conduct an experiment. I can note petrol consumption over an average week, then I can increase the tyre pressure and again note petrol consumption over an average week. If consumption is reduced, then my hypothesis is supported. Casual experimentation is one of the commonest and most important ways in which people learn about their world. It is an extremely powerful method because it allows us to identify the causes of events and thus gain control over our destiny.

Not surprisingly, systematic experimentation is the most important research method in science. Experimentation involves *intervention* in the form of *manipulation* of one or more **independent variables**, and then measurement of the effect of the treatment (manipulation) on one or more focal **dependent variables**. In the example above, the independent variable is tyre inflation, which was manipulated to create two experimental conditions (lower versus

higher pressure), and the dependent variable is petrol consumption, which was measured on refilling the tank at the end of the week. More generally, independent variables are dimensions that the researcher hypothesises will have an effect and that can be varied (e.g. tyre pressure in the present example, and the presence or absence of an audience in the ballet-dancing example). Dependent variables are dimensions that the researcher hypothesises will vary (petrol consumption or quality of the ballet dancer's performance) as a consequence of varying the independent variable. Variation in the dependent variable is *dependent* on variation in the independent variable.

Social psychology is largely experimental, in that most social psychologists would prefer to test hypotheses experimentally if at all possible, and much of what we know about social behaviour is based on experiments. Indeed, one of the most enduring and prestigious scholarly societies for the scientific study of social psychology is the Society for Experimental Social Psychology.

A typical social psychology experiment might be designed to test the hypothesis that violent television programs increase aggression in young children. One way to do this would be to assign 20 children randomly to two conditions in which they individually watch either a violent or a non-violent program, and then monitor the amount of aggression expressed immediately afterwards by the children while they are at play. Random assignment of participants (in this case, children) reduces the chance of systematic differences between the participants in the two conditions. If there were any systematic differences, say, in age, gender or parental background, then any significant effects on aggression might be due to age, gender or background rather than to the violence of the television program. That is, age, gender or parental background would be confounded with the independent variable. Likewise, the television program viewed in each condition should be identical in all respects except the degree of violence. For instance, if the violent program also contained more action, then we would not know whether subsequent differences in aggression were due to the violence, the action, or both. The circumstances surrounding the viewing of the two programs should also be identical. If the violent programs were viewed in a bright red room and the nonviolent programs in a blue room, then any effects might be due to room colour, violence, or both. It is critically important in experiments to avoid confounding: the conditions must be identical in all respects except for those represented by the manipulated independent variable.

We must also be careful about how we measure effects: that is, the dependent measures that assess the dependent variable. In our example it would probably be inappropriate, because of the children's age, to administer a questionnaire measuring aggression. A better technique would be unobtrusive observation of behaviour, but then what would we code as 'aggression'? The criterion would have to be sensitive to changes: in other words, loud talk or violent assault with a weapon might be insensitive, as all children talk loudly when playing (there is a *ceiling effect*), and virtually no children violently assault one another with a weapon while playing (there is a *floor effect*). In addition, it would be a mistake for whoever records or codes the behaviour to know which experimental condition the child was in: such knowledge might compromise objectivity. The coder(s) should know as little as possible about the experimental conditions and the research hypotheses.

The example used here is of a simple experiment that has only two levels of only one independent variable—called a one-factor design. Most social psychology experiments are more complicated than this. For instance, we might formulate a more textured hypothesis that aggression in young children is increased by television programs that contain *realistic* violence. To test this hypothesis, a two-factor design would be adopted. The two factors (independent variables) would be (1) the violence of the program (low versus high) and (2) the realism of the program (realistic versus fantasy). The participants would be randomly assigned across four experimental conditions in which they watched (1) a non-violent fantasy program, (2) a non-violent realistic program, (3) a violent fantasy program, or (4) a violent

#### Confounding

Where two or more independent variables covary in such a way that it is impossible to know which has caused the effect.

realistic program. Of course, independent variables are not restricted to two levels. For instance, we might predict that aggression is increased by moderately violent programs, whereas extremely violent programs are so distasteful that aggression is actually suppressed. Our independent variable of program violence could now have three levels (low, moderate, extreme).

### The laboratory experiment

The classic social psychology experiment is conducted in a **laboratory** in order to be able to control as many potentially confounding variables as possible. The aim is to isolate and manipulate a single aspect of a variable, an aspect that may not normally occur in isolation outside the laboratory. Laboratory experiments are *intended* to create artificial conditions. Although a social psychology laboratory may contain computers, wires and flashing lights, or even medical equipment and sophisticated brain imaging technology, often it is simply a room containing tables and chairs. For example, our ballet hypothesis could be tested in the laboratory by formalising it to one in which we predict that someone performing any well-learned task performs the task more quickly in front of an audience. We could unobtrusively time individuals, for example, taking off their clothes and then putting them back on again (a well-learned task) either alone in a room or while being scrutinised by two other people (an audience). We could compare these speeds with those of someone dressing up in unusual and difficult clothing (a poorly learned task). This method was actually used by Markus (1978) when she investigated the effect of an audience on task performance (see Chapter 8 for details).

Social psychologists have become increasingly interested in investigating the biochemical and brain activity correlates, consequences and causes of social behaviour. This has generated an array of experimental methods that makes social psychology laboratories look more like biological or physical sciences laboratories. For example, a psychologist might wish to know why stress or anxiety sometimes occurs when we interact with other people, and so might measure the change in the level of the hormone cortisol in our saliva (e.g. Blascovich & Seery, 2007; Townsend, Major, Gangi & Mendes, 2011). Research in social neuroscience using functional magnetic resonance imaging (fMRI) has become popular. This involves participants being placed in a huge and very expensive magnetic cylinder to measure their electro-chemical brain activity (Lieberman, 2010).

Laboratory experiments allow us to establish cause—effect relationships between variables. However, laboratory experiments have a number of drawbacks. Because experimental conditions are artificial and highly controlled, particularly social neuroscience experiments, laboratory findings cannot be generalised directly to the less 'pure' conditions that exist in the 'real' world outside the laboratory. However, laboratory findings address *theories* about human social behaviour, and on the basis of laboratory experimentation we can generalise these theories to apply to conditions other than those in the laboratory. Laboratory experiments are intentionally low on **external validity** or **mundane realism** (i.e. how similar the conditions are to those usually encountered by participants in the real world) but should always be high on **internal validity** or **experimental realism** (i.e. the manipulations must be full of psychological impact and meaning for the participants) (Aronson, Ellsworth, Carlsmith & Gonzales, 1990).

Laboratory experiments can be prone to a range of biases. There are **subject effects** that can cause participants' behaviour to be an artefact of the experiment rather than a spontaneous and natural response to a manipulation. Artefacts can be minimised by carefully avoiding **demand characteristics** (Orne, 1962), *evaluation apprehension* and *social desirability* (Rosenberg, 1969). Demand characteristics are features of the experiment that seem to 'demand' a particular response: they give information about the hypothesis and thus inform

#### Laboratory

A place, usually a room, in which data are collected, usually by experimental methods.

#### fMRI (functional magnetic resonance imaging)

A method used in social neuroscience to measure where electrochemical activity in the brain is occurring.

#### External validity or Mundane realism

Similarity between circumstances surrounding an experiment and circumstances encountered in everyday life.

#### Internal validity or Experimental realism

Psychological impact of the manipulations in an experiment.

#### Subject effects

Effects that are not spontaneous, owing to demand characteristics and/or participants wishing to please the experimenter.

# Demand characteristics

Features of an experiment that seem to 'demand' a certain response.

helpful and compliant participants about how to react to confirm the hypothesis. Participants are thus no longer naive or blind regarding the experimental hypothesis. Participants in experiments are real people, and experiments are real social situations. Not surprisingly, participants may want to project the best possible image of themselves to the experimenter and other participants present. This can influence spontaneous reactions to manipulations in unpredictable ways. There are also **experimenter** effects. The experimenter is often aware of the hypothesis and may inadvertently communicate cues that cause participants to behave in a way that confirms the hypothesis. This can be minimised by a double-blind procedure, in which the experimenter is unaware of which experimental condition they are running.



**Brain imaging** Social neuroscientists are using new techniques, such as fMRI, to establish correlates, consequences and causes of social behaviour

Since the 1960s, laboratory experiments have tended to rely on psychology undergraduates as participants (Sears, 1986). The reason is a pragmatic one—psychology undergraduates are readily available in large numbers. In almost all major universities there is a research participation scheme, or 'subject pool', whereby psychology students act as experimental participants in exchange for course credits or as a course requirement. Critics have often complained that this overreliance on a particular type of participant may produce a somewhat distorted view of social behaviour—one that is not easily generalised to other sectors of the population. In their defence, experimental social psychologists point out that theories, not experimental findings, are generalised, and that replication and methodological pluralism ensures that social psychology is about people, not just about psychology students.

## The field experiment

Social psychology experiments can be conducted in more naturalistic settings outside the laboratory. For example, we could test the hypothesis that prolonged eye contact is uncomfortable and causes 'flight' by having an experimenter stand at traffic lights and either gaze intensely at the driver of a car stopped at the lights or gaze nonchalantly in the opposite direction. The dependent measure would be how fast the car sped away once the lights changed (Ellsworth, Carlsmith & Henson, 1972; see also Chapter 15). Field experiments have high external validity and, as participants are usually completely unaware that an experiment is taking place, are not reactive (i.e. no demand characteristics are present). However, there is less control over extraneous variables, random assignment is sometimes difficult, and it can be difficult to obtain accurate measurements or measurements of subjective feelings (generally, overt behaviour is all that can be measured).

## Non-experimental methods

Systematic experimentation tends to be the preferred method of science, and indeed it is often equated with science. However, there are all sorts of circumstances where it is simply impossible to conduct an experiment to test a hypothesis. For instance, theories about planetary systems and galaxies can pose a real problem: we cannot move planets around to see what happens! Likewise, social psychological theories about the relationship between biological gender and decision making are not amenable to experimentation, because we

## Experimenter effects

Effect that is produced or influenced by clues to the hypotheses under examination, inadvertently communicated by the experimenter.

#### **Double-blind**

Procedure to reduce experimenter effects, in which the experimenter is unaware of the experimental conditions.