Part One

Introduction

The Science of Intimate Relationships 1

Focus of the book – domains of scientific study – interdisciplinary links – relationship mind and body – common sense and pop psychology – research methods – book overview – summary and conclusions

> The emergence of a science of relationships represents a frontier – perhaps the last major frontier – in the study of humankind.
>
> Berscheid and Peplau, 1983

The first known academic treatise on intimate relationships was *Plato's Symposium*, written approximately 2300 years ago. In this historic document, Aristophanes tells a tale of a curious mythical being that is spherical in form with two complete sets of arms, legs, and genitalia. Because of the strength and speed of these creatures (they cartwheeled around on four arms and four legs), they posed a threat to the gods. Accordingly, Zeus split them in half and rearranged their genitals so that they were forced to embrace each other front on to have sexual relations. Some of the original beings had two sets of male genitalia, some had two sets of female genitalia, and some had one set of female and one set of male genitalia. Thus, procreation of the species was possible only by members of the original male–female creatures getting together. Possibly in deference to the sexual orientation of some of his audience (or to the tenor of that time), Aristophanes was quick to add that males who sought union with other males were "bold and manly," whereas individuals who originated from the hermaphrodite creatures were adulterers or promiscuous women (Sayre, 1995, p. 106). Regardless of sexual orientation, the need for love is thus born of the longing to reunite with one's long-lost other half and to achieve an ancient unity destroyed by the gods.

As this allegory suggests, individuals are alone and incomplete – an isolation that can be banished, or at least ameliorated, when humans pair off and experience the

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intimacy that can only be gained in a close, emotionally connected relationship. Such intimacy, the experience of reuniting with one's long-lost other half, reaches its peak in parent–infant bonding and in the intimate high of romantic sexual relationships. But such intimacy is also experienced quite powerfully and deeply in platonic relationships, familial relationships, and in the long sunset of sexual relationships that have lost their passionate urgency and settled into a deep form of close companionship.

Just like Plato's mythical beings, then, humans have a basic need to be accepted, appreciated, and cared for, and to reciprocate such attitudes and behaviors – in short, to love and to be loved (Baumeister and Leary, 1995). This is especially true for finding a sexual or romantic partner, a quest that can range from a one-night stand to seeking out a mate for life. Indeed, for most people the goal of forming a permanent, sexual liaison with another person is a pivotal goal in life in which a massive outlay of energy is invested.

In this textbook, we confine our attention largely to intimate relationships that are sexual or romantic rather than other types of relationships, such as parent–child relationships, platonic friendships, casual friendships, or co-worker relationships. Obviously, intimate relationships can be, and often are, influenced by these other types of relationships. When these connections are important or salient, we will address them. Moreover, we discuss certain categories of non-sexual relationships that are centrally related to adult intimate relationships, the most important being parent–child relationships. And we discuss both heterosexual and same-sex relationships, including their similarities and differences. Nevertheless, our attention is focused on heterosexual relationships, simply because most scientific research has investigated heterosexual relationships.

This introductory chapter sets the scene for the book by tracing the history of scientific work on relationships, dissecting what is true (and false) about common-sense and pop psychology, briefly discussing basic research methods in the field, and finally presenting a brief overview of the book's contents. We have boldfaced all technical terms the first time they appear in each chapter of the book, and provide brief definitions of each term in the glossary at the end of the book.

The Science of Intimate Relationships: a Brief History and Analysis

As Plato's symposium attests, humans have been theorizing about relationships for eons. This is not surprising, given the proclivity of humans to develop causal models and explanations, many of which are based on culturally shared understandings. Indeed, this is one hallmark of our species. Consistently, many of the topics covered in this book have been discussed in literature and plays hundreds of years before any rigorous scientific investigation of relationships appeared (think Homer, Shakespeare, and Jane Austen).

The first scientific forays into intimate relationships did not take place until the twentieth century. To give you some idea of the way in which scientific work has taken

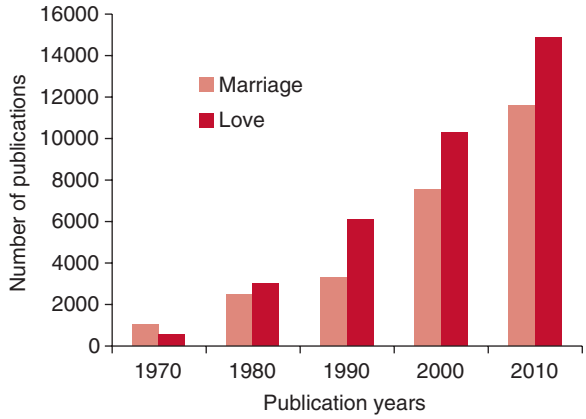

Figure 1.1 Publications from 1970 to 2010 – love and marriage

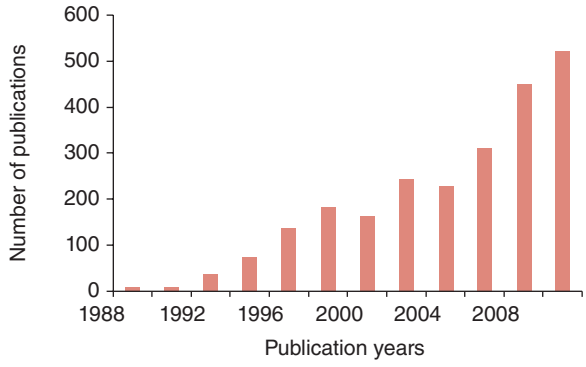

Figure 1.2 Publications from 1988 to 2010 – sexual or romantic relationships

on tsunami proportions in relatively recent years, we used a popular academic data base – the Web of Science – to assess the number of publications in scientific journals devoted to the topic of relationships during the past 40 years (from 1970 to 2010). We first used the key words *love* and *marriage*. As shown in Figure 1.1, the number of publications has rapidly increased over the last 40 years. We then used the key words *sexual* or *romantic relationships* and looked at the number of publications in two-year periods from 1987 to 2010. The results, shown in Figure 1.2, also reveal a dramatic rise in publications, in this case from 12 in 1987/1988 to 520 in 2009/2010! These results show that nearly 70% of all the publications in scientific journals in these domains have appeared during the past 20 years, with about 40% of the articles published within the last decade.

Domains of study

Publications relevant to romantic relationships have appeared across a diverse set of disciplines, including cross-cultural and anthropological studies, neuroscience, clinical

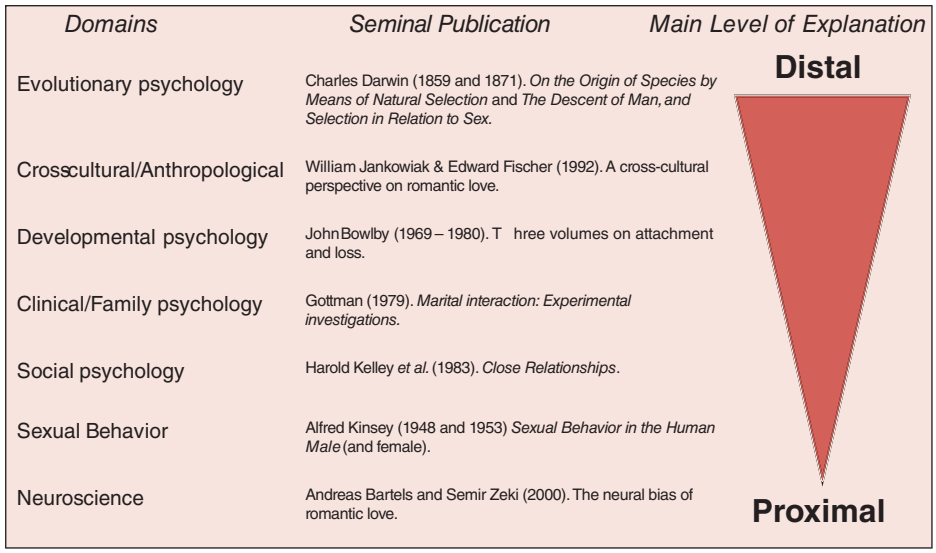

Figure 1.3 Major scientific domains studying sexual relationships from distal to proximal levels, along with seminal publications

and family psychology, developmental psychology, the science of sexual behavior, evolutionary psychology, and social and personality psychology. Figure 1.3 gives our take on the pioneering contributions in each field. Notably, all of the pioneering contributions were published in the second half of the twentiethcentury, with two stunning exceptions – two publications in the second half of the nineteenth century by Charles Darwin (more on Darwin later).

Scientific approaches to the study of intimate relationships differ according to their goals and level of focus (see Figure 1.3). At the most general level, all human sciences have the same core aims – the explanation, prediction, and control of human behavior – although certain aims are sometimes emphasized depending on the particular approach. For example, clinical psychology emphasizes the prediction and control of relationship phenomena (especially relationship functioning, success, and stability), whereas social psychology and evolutionary psychology focus more on explanation.

Different approaches to the study of human relationships concentrate on different goals or questions, and, thus differ in their specific domain(s) of investigation. The study of social development, for example, is interested in understanding the development of bonding and attachment in childhood and how it relates to the development of intimate relationships across the life span (termed an **ontogenetic** approach). Evolutionary psychology is primarily concerned with understanding the evolutionary origins of human courting, sexual behavior, mate selection, parenting, and so forth. Thus, evolutionary psychology is primarily concerned with **distal** causes stemming from our remote evolutionary past in order to clarify current human behavioral, cognitive and emotional tendencies. Social psychology, in contrast, takes human dispositions

(behavioral, cognitive, and emotional) as givens, and seeks to model the way in which our dispositions combine with external contingencies in our local environment to produce important behavior, social judgments, and emotions. Thus, social psychology offers much more fine-grained predictions and explanations of particular behaviors and cognitions that occur in specific situations (a **proximal** level) than does evolutionary psychology. Anthropological and cross-cultural approaches, on the other hand, focus on the way in which broad cultural and institutional contexts frame and guide the behavior of individuals and couples. Whereas social psychology tends to focus on the links between the individual and the dyadic relationship (e.g. how one person's traits influence his or her partner and relationship outcomes), anthropological approaches tend to focus on connections between the couple (e.g. the rules and norms in relationship) and the wider culture in which the relationship is embedded.

An example A social psychological approach to understanding how people select mates might be to postulate a psychological model examining the importance that each partner places on particular characteristics (which will vary across individuals) are treated as cognitively stored standards, such as the perceived importance of finding an attractive and healthy mate. Individuals may then use these ideal standards to make choices between different potential mates or to evaluate how satisfied they are with their current mate. Resultant levels of satisfaction and relationship commitment, in turn, might then affect their own behavior, which might influence their partner's behavior, resulting in the couple deciding to live together or break off the relationship. Thus, a social psychological model describes *how* cognitions, emotions, and behaviors interact (combine) within each person, and also how individuals in relationships communicate and influence each other (see Chapter 3). These models can be quite detailed, describing, as they do, a complex reality. Nevertheless, they deal only with a certain slice of what influences individuals and relationships at a given point in time, much of which operates at the proximal level (see above) rather than at the distal level emanating either from the remote evolutionary past or wider cultural forces.

Evolutionary psychology, on the other hand, asks important questions that social psychologists usually do not ask, such as why do people want mates who are attractive and healthy in the first place, or what are the origins of certain gender differences? (To avoid confusion, throughout the book we will use "gender" to refer to males versus females, and "sex" to refer to sexual intercourse or related behaviors and attitudes.) Answers for evolutionary psychologists often lie in the evolutionary history of humans, particularly in the adaptive advantages that should have accrued to our ancestors in ancestral environments if they were attracted to and chose certain kinds of mates, such as those who were relatively attractive and healthy.

Interdisciplinary links

Scientists are increasingly working in an interdisciplinary fashion across all the domains shown in Figure 1.3. For example, social psychologists now are beginning to team up with evolutionary psychologists, developmental psychologists, and neuroscientists.

Indeed, the whole field is becoming inter-disciplinary. Covering all these aspects in a single book is a tall order, and this cannot be accomplished in just one theory. Nevertheless, we attempt to address this broad and diverse body of work in this book (which makes this textbook unique among relationship texts). Our ecumenical strategy is based on our conviction that the most appropriate way to deal with the wide range of scientific approaches to relationships is in terms of a theory-knitting approach that focuses on different levels of explanation, ranging from proximal to distal causes. Different theories focus on different claims and deal with different parts of the very complex causal nexus that drives human behavior, including how people think, feel, and act in their intimate relationships. Accordingly, such theories are not necessarily in conflict; rather, they are often complementary, providing different ways to view and understand how different parts of the proverbial elephant can be combined (see the final chapter).

The relation between mind and body

In this book, we constantly move between biological and psychological processes. In Chapter 3, we cover the relationship mind. In Chapter 4, we discuss the relationship body and brain – which raises a longstanding debate in philosophy and science about the connection between minds and brains. The standard scientific stance, to which we adhere, is termed a **materialist** perspective. According to this view, the human mind and brain are one and the same, but they describe what is happening at different explanatory levels. A computer analogy clarifies this esoteric-sounding claim. The same computer software or program can be used to access and manipulate the stored information in the memory of two computers that differ in their internal hardware. A precise description of the two computers in terms of their electrical currents, stored electrical potentials, and hardware can also be provided. These latter descriptions, however, fail to give an adequate description and explanation of what the two computers actually do, which may be identical according to a higher-order description of how the information is processed in each computer (as specified by the programming software).

This computer analogy of the human brain and mind is irresistible – the mind is akin to a higher-order description of the brain's hardware that details how information is stored, accessed, organized, and the specific functions it is used for. Both cognitive and social psychology operate at the software level. A neurological description of the brain, on the other hand, describes the hardware.

Interestingly, the common-sense psychology of human behavior is typically pitched at the software level of the brain. When we say that Mary believes that George is unhappy and buys him a gift to cheer him up, we are explaining Mary's behavior in terms of information that is stored and acted upon in the same way that we explain how other intelligent systems work (such as non-human animals and computers). If anyone believes that human behavior can be described and interpreted without the spectacles of common-sense psychological theory, try to imagine someone baking a cake without perceiving their actions as intentional, or developing a good explanation

for why George drove his car to Mary's place without mentioning any of his goals, beliefs, wishes, wants, personality traits, abilities, attitudes, intentions, or motives. Although both cognitive and social psychology approaches extend far beyond common-sense psychology, these former domains operate at the same explanatory level as common-sense theories of mind and behavior.

Common sense and pop psychology

Let's address two other claims that are often associated with the scientific study of intimate relationships. These two propositions are typically expressed as follows: (i) studying relationships and love scientifically will destroy the magic of it all; and (ii) studying intimate relationships scientifically only tell us what we already know based on common sense – like "good communication produces successful relationships" or "arguing and getting angry are bad for relationships" or "men are more aggressive in relationships than women."

Loud boos to both claims! There is no evidence that studying any phenomenon makes it less puzzling or enthralling. Indeed, the very opposite is true, especially in psychology, where what appear to be mundane and everyday behaviors (such as speaking or explaining someone else's behavior) become mysterious – even magisterial – feats when investigated more closely. Whether studying relationships tells us only what we already know, the proof of the pudding is in the eating – once you have read this book, you will be able to make a much more informed judgment of this claim. However, we have already laid a trap by citing three commonly accepted notions that extensive research suggests are either questionable or flat-out wrong. It turns out that the relation between communication and relationship satisfaction is not straightforward (Chapter 9), that arguing and getting angry are not necessarily bad for relationships (Chapter 9), and that men are not more frequently physically aggressive than women in relationships (Chapter 11). It does not pay to be overly confident about maxims learned at one's caregiver's knee, or gleaned from the latest column one has read about relationships in a magazine. Some popular stereotypes about relationships are true, others are false, and many are half-truths, as we will see.

On the other hand, we do not claim that all lay beliefs or theories (whether shared, common-sensical, and/or idiosyncratic) should be automatically dispensed with as unscientific rubbish. After all, laypeople have the same set of aims as do scientists – to explain, predict, and control their own lives and relationships. Common-sense theories and aphorisms regarding love and relationships have developed over eons of time. Given that we (humans) are still here and prospering, it is unlikely that all lay theories are utterly false, and therefore useless as tools for people to predict, explain, and control their own personal lives and relationships. However, this does not mean that lay wisdom is necessarily correct, or that it provides an adequate scientific theory. To adopt a scientific approach entails subjecting a theory or body of knowledge to the same critical methodological scrutiny, regardless of whether it comes from the Bible, from common sense, or from renowned authorities. Common-sense theories are a valuable resource that scientists can use to generate ideas, but common sense offers

a partial, limited, and sometimes false account of relationship phenomena (Fletcher, 1995).

However, even if common-sense theories or maxims are totally false, this does not mean that they are not worthy of scientific study. People's beliefs and theories influence their behavior, regardless of whether or not their mental states are true or false. For example, a man may believe (quite irrationally) that his wife is being unfaithful and, accordingly, he has an extramarital affair of his own in retaliation. The man's belief, although false, partly explains his behavior. Thus, if we wish to explain a person's behavior, thoughts, or feelings, we must take his or her common-sense beliefs and theories into account.

We also reject the claims that scientists should not investigate or report findings that might maintain or justify behavior judged as bad or inappropriate. Such claims are a dagger aimed at the heart of science, which is not in the business of suppressing truth or conforming to current commonplace views. Science investigates phenomena and strives to attain the truth. Arguments that evolutionary theories, for example, are wrong or detrimental to certain people because they justify differences between men and women and legitimate discrimination or prejudice confuse the "is vs. ought" distinction. To be sure, scientific theories and findings can be used for invidious purposes by unscrupulous or prejudiced individuals. But the real problem lies in how such theories are applied. For example, if men and women are different in certain ways as a matter of empirical fact, and there exists a desire to prevent discrimination and encourage equality, then we need to understand the causes of such differences – otherwise misdirected and expensive societal efforts are likely to fail and better ones not developed.

In sum, this is not a pop psychology book about relationships. It is not intended to save people's relationships or render instant nirvana. Indeed, one goal of this book is to counteract the avalanche of pop psychology information (and sometimes misinformation) dealing with intimate relationships. We do not believe that all pop psychology books are rubbish, or that self-help books may not be useful for some people. Our rule is *caveat emptor* – let the buyer beware – because, frankly, there is a considerable amount of relationship "snake-oil" promoted on talk shows, books, TV programs, the internet, and so forth. Much pop psychology, with its sloganeering and quick-fix solutions, is false or misleading. Intimate relationships are fascinating and complex – too complex to be captured in terms of achieving relationship utopia in five easy steps. Over the many years we have spent studying relationships scientifically, we have developed a great deal of respect for the many ways in which couples heroically struggle, often against long odds, to predict, control, and understand their own intimate relationships and lives. All too often, pop psychology fails to connect to the real psychological world of most intimate relationships, and sells people well short.

Research methods

It is difficult to interpret and understand the results of scientific research without having some basic understanding of the research methods and statistics employed. For this reason, we will briefly describe the scientific methods and data analytic approaches

used in different studies when we describe and discuss them in each chapter. However, to give a heads up, all of the studies that we will discuss either observe something or manipulate something involving relationships. In social psychology, the former are termed **correlational** studies, and the latter are **experimental** designs. The advantage of experimental studies (in combination with random assignment of participants to experimental conditions) is that they can isolate and offer compelling evidence for whether an experimentally manipulated variable actually causes changes in an outcome (dependent) variable. In contrast, correlational studies leave causal claims more difficult to pin down. For example, relationship satisfaction is typically positively correlated with good communication (both of which can be measured with self-report scales). However, this result is consistent with relationship satisfaction causing good communication, good communication causing relationship satisfaction, or some **third variable** (say depression) causing communication and satisfaction to move up and down together, giving the illusion that the two are causally linked.

However, things are not quite this simple. First, even though experimental studies can provide evidence for causality, the conclusions reached depend on how well the experiments are done and how valid and effective the experimental manipulations are. Some experiments, even published ones, may not faithfully represent what happens in the real world of relationships. Second, it is often impossible ethically to do certain types of experiments. For example, relationship satisfaction or communication cannot ethically be manipulated in ongoing relationships. Third, correlational designs (using a statistical technique such as **multiple regression**) can identify which variable might be causing which by tracking both variables over time and calculating the paths that go from relationship satisfaction at Time 1 to changes of good communication at Time 2, and from good communication at Time 1 to changes in relationship satisfaction at Time 2. The problem of third variables sometimes can also be overcome, to some extent, by calculating the path between good communication and relationship satisfaction, while statistically controlling for the effects of, say, depression. If the paths remain statistically significant, depression is not likely to be a third variable.

Incidentally, we will often report correlations in this book, so a quick primer is in order. Correlations between two variables can range from −1.0 to 1.0, where the midpoint (zero) is equivalent to no relationship at all. If the correlation is negative, then this means that one variable goes up while the other goes down. For example, studies typically report that depression is negatively correlated with relationship satisfaction, which means that more depressed people have lower relationship satisfaction. The size of the correlation also counts. As a rule of thumb, a correlation of .10 is usually considered low, .30 is a medium correlation, and .50 a large correlation. For a familiar example, the correlation between height and weight is large at about .70.

The range of methods used in the studies reported in this book are extensive and often clever. Relationship scientists have invented intriguing ways of measuring and manipulating variables in the laboratory, such as using computers to measure reaction times (indicating the cognitive accessibility of specific thoughts) and to assess unconscious mental processes. They also gather different kinds of self-reports via the internet, from dating agencies, and across different cultures, on emotions, expectations,

memories, preferences, attitudes, evaluative standards, and mind-readings of partner's thoughts and feelings. They sometimes ask questions of partners' friends or family members, and occasionally eavesdrop on people's everyday experiences via the use of hand-held computers or cell phones. And they observe and video-record relationship interactions in both the laboratory and in couples' homes (sometimes surreptitiously), use **brain imaging** techniques, gather genetic evidence, analyze **natural experiments** in which certain groups have set up local subcultures (e.g. religious cults, Israeli kibbutz), compare humans with other species, and conduct computer simulations.

Along with an array of new methods, the last two decades have also witnessed rapid growth in the development of new statistical tools for modeling the psychological processes between partners and across time, and measuring changes in variables as relationships develop. We won't go into detail on such methods (you may be pleased to know!), but will give enough information as we proceed to give you an intuitive grasp of how such methods work.

Contents of the book

In the second chapter of this introductory section of the book, we outline some key theories in the interdisciplinary science of intimate relationships, and discuss the multiple threads that tie intimate relationships and human nature together. In Part Two of the book, we discuss the nature of the human relationship animal in two chapters that focus on the relationship mind and the relationship body. In Part Three, we address the initial development of intimate relationships, with chapters discussing **attachment theory** and mate selection. Part Four delves into major relationship topics that deal with the maintenance phases of intimate relationships – love, mind-reading, communication, sex, and violence. In Part Five, we summarize the causes and consequences of relationship dissolution. Finally, in the concluding chapter, we attempt to join all the dots and provide an integrated summary of the science of intimate relationships.

Because this book deals with the scientific study of relationships, we offer few unadorned or iron-clad conclusions. Relationship science is a hotbed of argument and disagreement about issues, big and small. Many intriguing questions and current controversies will be raised, a few of which remain unanswered or unresolved. Science is like that. Whenever possible, we attempt to present integrated accounts of what is currently known about each area of investigation based on the best available scientific evidence. In many ways, science operates like a courtroom, with the jury being the wider scientific community, the judge being the editors and board members of scientific journals (who set the rules about admissible evidence), and the lawyers being the warring factions presenting their own versions of the truth. When students get into the controversies and arguments in the scientific literature, they are sometimes tempted to throw up their hands in despair, thinking "You can prove anything!" We hope to show that such an attitude is unnecessary and wrong, that a balanced analysis

of scientific findings often lays the facts bare, and that an intelligent evaluation of the available theories that account for the facts usually reveals the best scientific paths to pursue.

Summary and Conclusions

In this opening chapter, we postulated what you may reasonably think is a no-brainer – that intimate relationships are important, very important, to most people. Thus, the way they work (or sometimes don't work!) have been central themes in classic literature, plays, and the media for as long as writing has existed. Moreover, lay theories and beliefs about intimate relationships almost certainly predate the invention of writing by millennia. In contrast, scientific investigations of relationship phenomena have been a recent arrival. With the exception of Darwin's magisterial works on evolution (published in the latter half of the 1800s), all the seminal contributions to relationship science across different domains were published between 1948 and 2000 (see Figure 1.3), with about 70% of all scientific publications appearing within the past 20 years (see Figure 1.1).

We pointed out that different disciplines approach intimate relationships with different goals and often examine them at different levels of analysis. For example, evolutionary psychology is interested in the distal origins of love, sex, and mate selection, whereas social psychology focuses more on the proximal forces in the immediate environment that influence how we think, feel, and behave in relationships. We also suggested that integrating the best parts of these two approaches of scientific investigation can yield novel insights and a deeper, more nuanced understanding of intimate relationships. To put it bluntly, this book is an evidence-based argument for the value of adopting an interdisciplinary approach to understanding intimate relationships.

Finally, we made a plea for "parking" what you know, or think you know, about relationships at the front door before you enter this academic house. This is not because we think that all common-sense beliefs are false or wrong. On the contrary, many common-sense and culturally based beliefs have more than a grain of truth, as we shall see. Rather, a scientifically based approach to the topics covered in this book demands a willingness to face new and perhaps challenging ideas about intimate relationships.

To conclude, this book illustrates how scientific work on relationships has a double-barreled role. It increases our understanding of intimate relationships, while simultaneously informing our understanding of the basic building blocks of psychology: cognition, affect, and behavior. This is primarily because so much of human cognition, emotion, and behavior is deeply interpersonal in nature. At the beginning of this chapter, we cited a famous quote from two pioneers of the field, advanced 28 years ago, that the emergence of a science of relationships may represent the last major frontier in the study of humankind. This textbook illustrates the many ways in which this final frontier has more or less been breached.