1   Introduction

Digital technologies play important roles in both our everyday and working lives and will continue to increase in importance in the future. Given this importance it is no wonder that cyberpsychology has emerged as a new subdiscipline within psychology and is being taught in many mainstream psychology degrees as well as disciplines such as media and communications, philosophy, sociology, criminology and security studies. Well-regarded, high-impact journals have been available for some time that focus solely on cyberpsychology. Conferences have also been designed to focus on this topic and are growing in popularity. Cyberpsychology master's courses are sprouting up across the globe and the number of students drawn to these courses continues to increase – most likely because the Internet continues to grow and affect people's lives in new, challenging and exciting ways.

Cyberpsychology is the study of individuals, societies and digital technologies and the psychology of how these interact. Cyberpsychology applies psychological theory to explain how individuals interact in cyberspace and how these interactions might affect our offline lives. It offers a new way to define the self and society. In this book, we have attempted to cover the breadth and depth of cyberpsychology, although as the discipline expands it is likely to incorporate new and exciting areas and foci.

This book is intended as a textbook for both undergraduate and postgraduate students in psychology as well as other relevant degrees that incorporate psychology into their syllabuses. It aims to set out key theories and empirical research conducted within the field of cyberpsychology. It does so by also considering real-world problems and events, and considers how theories in this field might shed further light on our understanding of these issues. Moreover, it engages readers with novel and relevant issues – encouraging them to critically evaluate the current literature and to take their own personal stance on particular issues.

We begin the book by focusing on the complex issue of defining the 'Self' in cyberspace, and present the argument that the Internet has changed the way we view and understand the self. In Chapter 2, we start by considering traditional theories of the self – for example, trait theory, social identity theory, possible selves, a social constructionist approach and a postmodern view of the self. We follow this with a history of how the self has been understood in cyberspace. In this chapter we acknowledge Turkle's early work, which theorized that individuals could explore and gain new insights about identity within cyberspace. Other theorists who embraced these utopian views about the Internet are also mentioned in this chapter, with

particular reference to feminist theorists, such as Haraway. We note, however, that Turkle has in more recent times rejected her own earlier claims and now takes the opposite view, arguing that digital technologies can lead to a new sense of solitude. Gergen's theory on the saturated self is also highlighted here, as is his view that new technologies have led to a fragmentation of the self. We briefly outline the ways in which traditional theories of the self have been applied to how the self might be presented in cyberspace – for example, considering Goffman's 'performing self', the theory of 'possible selves' and social identity theory. We conclude the chapter by noting that there are few places where users can be visually anonymous, and we therefore suggest that theories of the self online need to consider differences between spaces where users are visually anonymous and those where they present images of themselves, as well as the choices they make to visually present themselves.

In Chapter 3, we set out some of the theories and classic studies that have examined online relationships – both between friends and romantic. We begin by setting out some of the well-known theories on relationship development that explain how relationships develop in the physical realm, such as social evolutionary theory, social penetration theory, exchange theory and equity theory. We then move on to examine how these theories might be used to explain the development of online relationships, and point out some of their shortcomings. Given these shortcomings, theories have been developed to explain the uniqueness of some relationships initiated and developed in cyberspace compared with the physical world. Theories such as the 'disinhibition effect', social presence theory, social information processing theory and hyperpersonal communication theory are outlined. We explain how these theories have emerged and how they have been applied to explain online relating. We also provide a brief history of online relating and detail some of the ways in which relating has changed as technology has developed – especially from a more textual space to a space with greater bandwidth and less visual anonymity.

Online dating has changed from a stigmatized method for finding a date to a popular matching method for people in many countries across a range of ages. Chapter 4 focuses specifically on this phenomenon, and picks up on some of the theories outlined in Chapter 3 to examine how relationship initiation and development differ from but also share commonalities with relationships formed in other places online and in the physical realm. We examine research that has found personality differences relating to use of online dating; for example, some studies have found that shy individuals are more likely to use dating sites compared with more socially confident individuals. We also explore the notion that the self is commodified on online dating sites and that how one is presented is, in part, dependent on which aspects are more likely to draw in desirable dates (this motivation sometimes leads to deception, where daters lie about certain aspects of themselves, such as height and weight). We also go through the stages involved in the online dating process, noting that a new wave of dating apps is changing users' experiences of this process.

In Chapter 5 we consider online sexual activities. We note that, even in the early days of the Internet, people engaged in cybersex, in the form of erotic textual communication. This chapter outlines some of the well-cited papers that consider why individuals partake in cybersex. The Triple A Engine, for example, is a model put

forward by Cooper and his colleges to argue that the Internet's affordability, anonymity and accessibility initially led some individuals to be drawn to this space to engage in sexual activities. Cooper believed that some of these people became cybersex compulsives. This chapter further outlines some of the problems associated with cybersex as well as some of its liberating aspects. One of the problems, which continues to exist in contemporary times, is that the Internet enables risky offline sexual encounters, with research revealing correlations between locating sexual partners online and contracting sexually transmitted infections (STIs). Sexting, described in this chapter, is also an activity that is problematic and sometimes illegal. On the flip side, however, the Internet provides sexual health information, which is easy to access, without the perceived embarrassment of asking a doctor, thereby potentially preventing the transmission of sexual diseases.

As we discuss in Chapter 6, some people perceive Internet infidelity to be a genuine betrayal that can have real repercussions in couples' lives. We define Internet infidelity based on current theories and empirical findings. We examine the sexual and emotional aspects of relationship transgressions both online and offline. This chapter also presents a critical examination of the theories that explain why men and women become jealous in the physical world (e.g., social evolutionary theory and the social cognitive approach) and whether these theories can be applied to explain jealousy about seemingly equivalent activities in cyberspace. Although there is a dearth of research available on Internet infidelity, the chapter points out some possible qualitative differences between online and offline affairs. Online affairs, for example, are potentially easier to split off from people's everyday lives – making it easier for people engaging in an affair to rationalize that it is not a relationship transgression. We also consider whether having cybersex with an avatar might constitute 'real' betrayal. Here, we provide some real-life examples in which people have felt hurt and betrayed by their partners' cybersex activities in *Second Life*.

There has been much talk over the years about the digital divide. Some discuss this with respect to a divide between social classes, while others consider differences between ages (e.g., digital natives vs. digital immigrants). Chapter 7 focuses on digital natives – children's and teens' use of digital technologies. It does not, however, simply address the ease with which young people have appropriated digital technologies into their lives. In addition, it considers the issues young people have had to deal with since before there was an Internet (e.g., identity, sexuality, activism) and how these issues are dealt with in cyberspace. We examine here whether the use of digital technologies might be harmful or empowering for young people and detail empirical findings that support both views. A balanced view is provided, pointing out both the risks and the opportunities. We examine the types of illegal content young people might be exposed to and the kinds of illegal activities some young people engage in. We also ask whether, for some youth, exposure to illegal content might be the start of a slippery slope. Although we examine cyberharassment in Chapter 13, in this chapter, we pay some attention to how this behaviour can affect young people. This chapter also outlines how criminals target young people in order to scam them as well as how their identity might be stolen to then be used to scam others (e.g., the grandparents scam). Finally, the chapter addresses the very real concern of radicalization of youth via the Internet.

As far back as 1913, Thomas Edison predicted that new technology would be at the forefront of education. As Chapter 8 illustrates, Edison was probably correct in his prediction, but most likely in ways that he did not imagine. We begin the chapter by focusing on e-learning and compare this with face-to-face learning, noting the advantages e-learning has to offer. We also comment on the features used in e-learning that might have a detrimental effect on students' learning performance. When comparing e-learning with face-to-face learning, we find that different types of learning might benefit from different teaching practices. For example, researchers have found that students prefer face-to-face discussions when engaged with difficult tasks and computer-mediated learning for simple tasks. In this chapter, as we have done in other chapters, we compare and contrast synchronous and asynchronous communication. We highlight the advantages of both with respect to e-learning. We also point out the necessary conditions for successful e-learning, including cognitive presence, social presence and teaching presence. In addition, we introduce the reader to media richness theory: a theory that has been applied to a number of settings, including educational. We set out, according to this theory, when it is best to use e-learning practices. Salmon's stage model is also looked at in this chapter, together with applications of this model to *Second Life*. Indeed, *Second Life* and other 3-D learning environments have become popular spaces for educators to use as learning environments, and in this chapter we take a look at some of the studies that have evaluated learning in these environments.

In Chapter 9 we move the focus from education to the pursuit of leisure and entertainment. Does the Internet free up time in which to pursue leisure activities? Does it provide new forms of entertainment? This chapter examines these questions and many more. We begin the chapter by operationalizing leisure, pointing out the different forms of leisure, such as serious and casual pastimes, and how, in the past, families might have more often joined together to play a board game at home. In contrast to this more traditional view, when we think of online games, we often image a teenager in a locked bedroom playing games in isolation or hooked up with other teenagers in their own bedrooms. Researchers, however, have found that online games can also help family members to keep in touch. Moreover, and as the reader will learn, one of the main functions of the Internet for older users is the pursuit of leisure activities, such as engaging in virtual hobbies (e.g., constructing family trees). Importantly, this chapter consults the literature on how much time we spend online for leisure and entertainment and how this compares with time spent on entertainment in the physical world. It examines the displacement and the engagement hypotheses. Readers will probably not be surprised to learn that many people multi-task entertainment in both realms (e.g., playing an online video game while watching the television). The chapter does question, however, how psychologically healthy it is to combine these tasks. In the final section of this chapter we consider how Twitter has been used as a source of entertainment, as well as the impact it has had on the perceived relationship between those who follow celebrities and the celebrity tweeters themselves.

Chapter 10 considers entertainment in more detail by focusing on gaming and gambling. We begin by examining online gaming and gambling addictions. It has

been speculated, for instance, that Internet gambling is potentially more likely to lead to addiction than gambling offline. Certain features of online gambling, such as access, privacy, anonymity and a better game experience, might increase the risk of developing problems. The addition of 'Internet gaming disorder' in the latest *Diagnostic and Statistical Manual of Mental Disorders* (DSM) is considered here together with some of the research linking online gaming problems with other psychological problems (e.g., attention deficit hyperactivity disorder (ADHD), sleep deprivation, substance abuse). This chapter also examines the theories and empirical evidence that address whether video games might lead to violent behaviour. Some of these theories include social learning theory, script theory, the frustration–aggression hypothesis, the cognitive neoassociation model and the general aggression model. We provide a critique of each of these theories and give details of studies that have attempted to find evidence for a link between aggressive behaviour and playing aggressive video games. We conclude, however, that the research findings are, at best, weak. Nevertheless, although violent videos games may have little to zero impact on aggressive behaviour, there still might be reason to feel some concern for people who play video games with certain content – that is, content considered taboo in the physical world (such as rape, torture or cannibalism). In this chapter we consider the available literature that investigates this issue, which suggests that some people might not be able to cope psychologically with engaging with this material in a game. Although much of the focus of this chapter is on the negatives of playing video games, we note that there are also many positives. For starters, video games are fun and enjoyed by many. Second, video games are increasing in popularity as educational tools, and in a range of settings. We conclude the chapter by considering some of the ways in which games might be used to teach new skills as well as attitudes.

In earlier chapters, we examine how people self-disclose more about themselves online (becoming hyperhonest). In contrast, in Chapter 11, we examine whether people are more deceptive in cyberspace compared to in the physical realm. Online, users can potentially deceive a greater number of people in novel ways. We begin this chapter by defining deception and move on to consider the types of deceptions evident in cyberspace: identity-based deception and message-based deception. Case studies on the 'Munchausen by Internet' phenomenon are provided in order to give examples of identity-based deception. (Munchausen's syndrome is a psychological condition where someone lies about being ill or induces symptoms of illness in themselves.) Munchausen by Internet is therefore a psychological condition, and some believe it ought to be formally recognized in the DSM. The Internet might afford us more opportunities to lie, but do we actually lie more on the Internet? This chapter examines the empirical evidence that addresses this question and elucidates some interesting conclusions. The current research suggests that people, in the main, lie more on the telephone. The chapter presents the features-based model, which explains this finding. We present studies that support this model but also point out that the model is not always supported when a distinction is made between spontaneous and planned lies. We also examine research that has attempted to detect deception – both offline and in cyber realms. Although much research is still needed, computer scientists, in particular, are starting to detect criminals who hide behind multiple identities.

Chapter 12 focuses on deception carried out by criminals including criminal acts such as phishing, mass-marketing fraud (MMF) and illegal downloads of online material. We begin the chapter by focusing on phishing, explaining how it works and the numbers of people who are tricked by this scam. The chapter also considers spear phishing, which is similar to phishing but involves a targeted attack rather than a random hack. Research has been conducted using real phishing emails to investigate why users respond to these emails. It has been found, for example, that paying attention to visceral triggers increases the likelihood of responding. Personality has also been found to play a role in predicting who is more likely to respond to a phishing email. This chapter considers the training programmes that have been developed to help end users detect phishing emails and the evaluation of these programmes. As the reader will note, there is still a great need to develop more effective training programmes. This chapter also considers another type of scam, that of MMF, which is a type of fraud that exploits mass communication techniques (e.g., bulk mailing, email, instant messaging, social networking sites (SNSs)) to con people out of money. We provide examples and data on the number of victims of this fraud. We provide a detailed account of the stages involved in the online dating romance scam. As with phishing attacks, personality has been found to predict the sorts of person who are more likely to respond to MMFs; however, the profiles potentially differ according to the specific fraud. The sorts of cognitive and motivation errors that victims are likely to make are also noted here. We point out that the harm caused by these types of scams can be both financial and psychological. Prevention and detection of MMF is difficult, as this chapter explains, and awareness campaigns have yet to be properly evaluated. Finally, we examine illegal downloads of online material, such as music and video. We comment on how individuals who engage in these activities often do not recognize their actions as criminal. Approaches to preventing this form of criminal behaviour are discussed, including encouraging individuals to think differently about purchasing materials such as videos and music in the future.

In Chapter 13 we continue focusing on the topic of online crimes by examining cyberharassment, hate crimes and cyberwarfare. We begin the chapter by considering online harassment and online stalking (a form of harassment). We operationalize these terms and discuss some of the problems with inconsistencies in the law across different countries. According to the literature, the Internet has afforded new opportunities to cyberstalk both individuals and organizations. Additionally, cyberstalking can, of course, accompany stalking and harassment in the physical realm. This chapter outlines some of the main distinctions between stalker and cyberstalking profiles, while noting that the research is fairly scant. It then moves on to consider hate crimes more broadly and examines how they might be carried out in cyberspace. We provide examples of hate crimes as well as extremists groups that have an online presence in order to recruit members to their groups. We also consider cyberwarfare – another topic with a scarcity of available research. We note here that governments and society have yet to properly codify and sanction a body of norms to govern state action in cyberspace. We also highlight some of the features of cyberwar that set it apart from traditional warfare. These features, we suggest, need to be considered as scholars and governments rethink the rules of war with respect to cyberwarfare. One way to

detect and counteract cyberattacks is via surveillance and monitoring. Although surveillance may be employed with good intentions, it nonetheless impinges on innocent civilians' privacy. Unsurprisingly, then, there has been much upset voiced by citizens about governments 'spying' on their online activities. We conclude this chapter by considering some of the current debates regarding surveillance and monitoring.

Chapter 14 continues to focus on online crimes, this time with a focus on child pornography and paedophilia. We acknowledge the increase in child pornography since the advent of the Internet and offer some reasons for this increase. The chapter also, importantly, provides a summary of legislation around child pornography in the UK and the US, and highlights some of the differences in this legalization. This comparison is made in order to elucidate the problems that can arise when law enforcement has to deal with this crime across borders; the comparison also points out some of the issues surrounding the application of the law to more recent phenomena, such as sexting. The psychological disorders associated with certain types of paedophilia are outlined, as is the role the Internet plays in these disorders. We also explain the differences between paedophiles who view child pornography and those who collect it, breaking down the types of collectors into the following categories: closet collector, isolated collector, cottage collector and commercial collector. This chapter summarizes the research that has considered the profile of the child pornography offender, although we note that many studies contend that a typical child pornography offender profile does not exist. The relationship between those who view child pornography and those who commit hands-on offences is considered with respect to the slippery slope hypothesis. In the final sections of this chapter we examine theoretical models that have been specifically developed or applied from other fields to explain why someone becomes a paedophile, considering, for example, courtship disorder theory, social learning theory, Finkelhor's precondition model, the pathways model and the integrated theory of sexual offending.

The focus in Chapter 15 moves from online crimes to online support and health care. We begin the chapter by highlighting figures that demonstrate the shift from obtaining health-related information in the physical world, via doctors and specialist services, to searching for sources online. We explicate the research that suggests that individuals who have just been diagnosed with a medical condition or who are seeking to help others cope with their medical problems are the most likely to search for health-related information on the Internet. We acknowledge here the benefits of obtaining health-related information from the Internet but also point out some of the problems associated with this activity. Some patients, for instance, feel more anxious after reading information about their particular illnesses. In addition, we note a specific problem associated with Internet searches for health-related information, that of 'cyberchondria'. Cyberchondria is construed not only as a form of reassurance-seeking but also as a manifestation of health anxiety and hypochondriasis. In this chapter we also consider the utility of online health forums, presenting evidence to suggest both the positive and negative effects of engaging in such forums. We also focus on e-therapy, operationalizing the term and examining the research on the benefits and drawbacks of this form of therapy. The dishibition effect is revisited in this chapter in

the context of the problems it might cause for some individuals in therapy. Although there has been some research on the evaluation of the effectiveness of e-therapies (some of which we summarize here), we note that more research is needed and that currently the findings are mixed. We conclude this chapter by considering immersive virtual environments and how they have been employed as tools in the treatment of a range of psychological problems. We provide examples of various psychological problems that could potentially be treated in these environments, such a phobias and post-traumatic stress disorder.

Our final chapter is a wrap up of the book. In Chapter 16, we remind the reader of some of the main issues discussed in the book and point to the current gaps in the literature. We remind the reader that it is important to understand that, as the Internet evolves, the way we behave online may also change, although some aspects will remain the same. We question whether the Internet has brought about a new world with new psychological issues, opportunities and challenges, and how much of our psychology remains the same.