Chapter 4
Is the Research to Date on Hackers Sufficient to Gain a Complete Understanding of the Psychology Involved?

ABSTRACT

Of all the types of cybercrime that exist, hackers are the cybercriminals who have probably engaged both the imagination of the general public and the interest of the entertainment industry the most. They are also those who have elicited the greatest quantity of psychological academic literature. It seems that we have an unsatisfied desire to comprehend why any individual would be drawn to this type of activity, which seems in some cases to have little immediate benefit for the cybercriminal.

This chapter aims to determine if we have discovered all that we need to about the psychology and motivations of hackers. Despite the vast quantities of literature in this area, it seems that we still do not have a thorough grasp on the mentality of the hacker. The chapter will commence with some background information regarding the methods used by hackers, a description of the history of hacking behaviour and terminology, and the legal dimensions of hacking. Following this, the chapter will consider the very diverse motives of hackers, as determined by psychological and criminological research. The personalities of computer hackers will then be examined, with special consideration of how psychological profiling could be used to help in solving hacking cases. Issues regarding punishment and prevention of hacking attacks will then be examined, and finally the difficulties in carrying out hacker research and potential directions for future research in this area will be explored.

BACKGROUND

There are numerous cases of famous hackers available in the literature. Former hacker Kevin Mitnick in particular has made a career from advising on computer security and has authored a number of books on hacking, with a particular focus on social engineering methods (see for example Mitnick & Simon, 2002 and Mitnick & Simon, 2005). Adrian Lamo has also experienced a lot of publicity due to his hacking activities. His 'white-hat' attempts to improve the security of firms led to mixed responses from the companies involved – some were highly appreciative of his efforts, while

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others filed lawsuits against him (see Mitnick & Simon, 2005). More recently, a hacker using the alias 'Neo' (the name of the main character from the 'Matrix' series of movies) has leaked data to a television station about pay details of managers of a Latvian bank that received financial support using Twitter (BBC News, 24th February 2010).

However, one of the most interesting hackers from a psychological perspective has to be Gary McKinnon, who hacked into 97 US government computers, including the US Navy and NASA, between 2001 and 2002, using the online name 'Solo'. His declared motive was "to prove US intelligence had found an alien craft run on clean fuel" (BBC News, 28th July 2009, para. 3). McKinnon's actions do not seem to be those that most individuals would take – his hacking became an obsession, and his real-life began to suffer the consequences – he lost his job and girlfriend, and eventually stopped eating properly and neglected his personal hygiene. In hindsight he indicated that he "almost wanted to be caught, because it was ruining me" (Boyd, 2008). McKinnon, a British citizen, fought extradition to the United States, despite admitting to the hacking charges, as it was feared that his mental health would be at risk if he was extradited. McKinnon has been diagnosed as having Asperger's Syndrome, an Autistic Spectrum Disorder, one of the symptoms of which can be the development of restricted, repetitive patterns of behavior, interests, and activities. McKinnon denies that his hacking was malicious in nature, or that it caused damage costing $800,000, although he faces up to 70 years in prison if convicted in the U.S., where prosecutors claim that he completed "the biggest military computer hack of all time" (BBC News, 31st July 2009). This case is of particular interest due to the diagnosed nature of McKinnon's psychological status, to which his defence say the authorities in the UK have not given proper consideration. They suggest that if he was to be extradited, McKinnon would suffer from "disastrous consequences" and that he should be tried on lesser charges in the UK in order to protect his mental health (BBC News, 31st July 2009). They indicate that there is "clear, uncontradicted expert evidence" that the stress of extradition could result in psychosis and suicide (BBC News, 9th June 2009), and later they indicated that he was suffering from "very severe depression" (BBC News, 10th December 2009).

While Gary McKinnon may not be the most typical of hackers, his case is of particular interest due to the role that his psychological disorder may have played in the origin of his crimes, and the considerations that may need to be taken with regard to his punishment due to the psychological effects he may suffer.

Definitions and Key Terms

Levy (1984) suggests that hacking began in the late 1950s at a few US universities at a time when computers were rare. The original 'hackers' were motivated to use and improve computer technology, and it is arguable that without them computers would not be as widespread as they are today. Indeed, many hackers today still defend their actions in similar ways, suggesting that they only hack in order to illustrate to the public how governments and large organisations are 'corrupt'. However, by the early 1960s hacking had begun to result in financial abuses and as such was becoming a nuisance to other computer users

The term 'hacker' is a cause for confusion among those wishing to study the field. The media, and the vast majority of the general public use it primarily to denote a person who gains unauthorised access to computer systems. However, many online individuals define a 'hacker' as simply a person who is proficient at building and modifying computer systems. The term 'cracker' is often used instead to describe those involved in criminal activity. This term was supposedly coined by hackers ca. 1985 to distinguish themselves from the journalistic misuse of 'hacker'. 'Cracking' normally involves maliciously accessing a network (as per the common perception of 'hacking').